

**The New World species of *Ataenius* HAROLD, 1867.  
III. Revision of the *A. imbricatus*-group sensu lato  
(Coleoptera: Scarabaeidae: Aphodiinae: Eupariini)\***

Zdzisława STEBNICKA

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**Abstract.** The *imbricatus*-group of the New World species of *Ataenius* HAROLD is revised. Nineteen species are recognised, including *A. pseudostercorator* sp. n. described from South America. Lectotype of *A. scabrellus* SCHMIDT is here designated, two new synonyms and one replacement name for a junior homonym are proposed as follows: *A. scabrellus* SCHMIDT, 1909 (= *A. havanensis* BALTHASAR, 1938 syn. n.), *A. luctuosus* [(BURMEISTER, 1877) = *A. tectus* PETROVITZ, 1973 syn. n.]] and *A. schmidtii* nom. n. (= *A. argillaceus* SCHMIDT). A key to species, diagnostic characters, distributions and available biological information are given, a cladistic analysis is presented for the hypothetical relationships among discussed taxa.

**Key words:** Scarabaeidae, Aphodiinae, *Ataenius imbricatus*-group, taxonomy, phylogeny, new species, New World.

Zdzisława STEBNICKA, Institute of Systematics and Evolution of Animals, Polish Academy of Sciences, Sławkowska 17, 31-016 Krakow, Poland.  
E-mail: [stebnicka@isez.pan.krakow.pl](mailto:stebnicka@isez.pan.krakow.pl)

## I. INTRODUCTION

This paper is the third in a series that revises the New World species of the genus *Ataenius* HAROLD. The first part is a revision of *A. crenator-nugator-perforatus* groups (STEBNICKA 2001), the second part deals with the West Indian *A. terminalis*-group (STEBNICKA 2002b). The present contribution is devoted to the *Ataenius imbricatus*-group of species ranging in distribution from the United States to Argentina and to the West Indies. The object of this work is to present the reliable means of identification for 19 currently recognised species of the group, hoping that, in addition, it will contribute to a more natural classification.

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## II. COLLECTIONS STUDIED

Approximately 2600 members of *Ataenius imbricatus*-group have been selected from the extensive material of Aphodiinae hitherto identified, including all the type specimens available in the collections. Several species reviewed here are represented by long series taken in various localities, that are plotted on contour maps.

The following institutions and private collections kindly contributed material for this study. The abbreviations listed below are used in all text citations:

BMNH	British Museum of Natural History, London
CFC	Carlos FLECHTMANN Collection, Brasilia (Brazil)
CMN	Canadian Museum of Nature, Ottawa
DEIE	Deutsches Entomologisches Institut, Eberswalde
FMLT	Fundacion MIGUEL LILLO, Tucumán, Argentina
FSCA	Florida State Collection of Arthropods, Gainesville
FVMC	Fernando VAZ-de-MELLO Collection, Viçosa, Brazil
HAHC	Henry & Anne HOWDEN Collection, Ottawa
HNHM	Hungarian Natural History Museum, Budapest
ISEA	Institute of Systematics and Evolution of Animals PAS, Krakow
JSC	Joachim SCHULZE Collection, Berlin
JWC	J. WAPPES Collection, Gainesville
MCZC	Museum of Comparative Zoology, Harvard University, Cambridge
MHNG	Muséum d'histoire naturelle, Geneva
MNHN	Museum National d'histoire naturelle, Paris
MZUSP	Museu de Zoologia, Universidade de São Paulo
NRS	Naturhistoriska Riksmuseet, Stockholm
PSC	Paul SKELLEY Collection, Gainesville
RMC	R. MORRIS Collection, Gainesville
RTC	R. TURNBOW Collection, Gainesville
SMNS	Staatliche Museum für Naturkunde, Stuttgart
SMTD	Staatliches Museum für Tierkunde, Dresden
TMP	Transvaal Museum, Pretoria
UNSM	University of Nebraska State Museum, Lincoln, Nebraska
USNM	United States National Museum of Natural History, Washington DC
WWC	William Warner Collection, Arizona
ZMHB	Zoologisches Museum für Naturkunde der Humboldt Universität, Berlin
ZSM	Zoologische Staatssammlung, Munich

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### III. TAXONOMY AND PHYLOGENY

#### *Ataenius imbricatus*-group

**D i a g n o s t i c c h a r a c t e r s.** Approximate length 3.0-6.0 mm. Body (Figs 8, 13, 23) parallel-sided or oblong oval, moderately convex, usually distinctly setose, in most species encrusted by greyish argillaceous coating or covered with oily dirt. Head moderate in size, strongly gibbose or moderately convex medially, gena prominent or not; clypeal edge rounded on each side of median emargination, rarely slightly angulate, never denticulate; clypeal surface always punctured, never transversely wrinkled, lateral area of head usually longitudinally strigose (punctures uniting into longitudinal lines), rarely areolate, vertex with round, fine punctures. Pronotum transverse, in some species unevenly convex with swellings or depressions; lateral edge margined, fringed with minute to moderate in length, stubby or spatulate setae, basal marginal line absent or occurs rarely; pronotal surface punctured. Scutellum small, semioval. Elytra parallel-sided or arcuate, basal bead fine, humeral denticles fine to moderate; elytral striae more or less distinctly impressed with inconspicuous to medium sized punctures inside, punctures very rarely crenate inner margins of intervals; intervals flat, convex or tectiform, in some species alternately higher, rarely swollen, usually distinctly setigerous. Ventral surface alutaceous, uncoated; abdominal sternites 2-3 finely fluted along sutures, sternites 4-5 often with coarse fluting; pygidium scabrously eroded in apical half. Profemur punctate or scabrous, meso- and metafemora usually punctate-setose, post-femoral lines present or absent; meso- and metatibiae slender, setaceous; apex of metatibia with slender spurs and external, setiform or spiniform process without trace of accessory spine; tarsi slender, basal tarsomere of metatarsus always longer than upper tibial spur and shorter or equal in length to following four tarsomeres together.

External sexual differences hardly visible; in males, the last abdominal sternite is usually shorter than in females. Male genitalia (Figs 3-7) poorly differentiated, relatively small, lightly sclerotized; parameres usually as long as phallobase, rounded apically; penis (Fig. 22) broad, with triangular sclerites of internal sac.

**R e m a r k s.** This group divides into two subgroups (Fig. 1). The first includes *A. morator* + *A. stercorator* which have the uncoated body and the pronotum with conspicuous marginal line. These species do not fit satisfactorily into any other species-group of *Ataenius*. The 17 species of the second subgroup are similar externally, sharing a number of character states in various combinations.

Complete data on distribution are given and available biological associations are summarized following descriptions of particular species. Under species descriptions, all characters defining the group are presumed to apply, unless stated otherwise.

It should be mentioned, that the strongly coated and dirty specimens of certain species of the group are difficult to identify correctly. Some sculpturing is visible only at magnifications over 100x and is practically inapplicable for identification, however, the stereoscan photos of some microstructures are here presented to demonstrate a compositeness of integument that is usually invisible and unknown for students.

#### C l a d i s t i c a n a l y s i s

Reconstruction of the phylogeny of the *Ataenius imbricatus* group of species was performed using 48 morphological character states. I examined characters of the most typical specimens of each species, because an advanced variation between and within populations makes qualification of characters difficult.

The following characters were used to construct the data matrix (Table I). Scores for character states: plesiomorphic = 0; apomorphic = 1.

*Body:* **1** – greyish argillaceous coating – (0) absent, (1) present. *Head:* **2** – anterior clypeal margin – (0) subangulate, (1) rounded; **3** – genae – (0) prominent, (1) not prominent; **4** – epistome – (0)

moderately gibbose, (1) strongly gibbose; **5** – surface punctures forming longitudinal lines – (0) absent, (1) present. *Pronotum*: **6** – fossulae or swellings – (0) absent (1) present; **7** – basal marginal line – (0) present, (1) absent; **8** – surface setae – (0) absent, (1) present; **9** – setae of lateral fringe – (0) moderate in length, (1) minute to short. *Elytra*: **10** – humeral denticle – (0) small, (1) moderate; **11** – surface setae – (0) absent, (1) present; **12** – striae – (0) deep, (1) shallow; **13** – stria punctures – (0) distinct, (1) inconspicuous; **14** – intervals alternately higher – (0) absent, (1) present; **15** – discal intervals – (0) convex, (1) carinate; **16** – interval surface – (0) smooth, (1) swollen. *Abdomen*: **17** – sternite pubescence – (0) absent, (1) present; **18** – sternites 3-4 fluting – (0) deep, (1) shallow. *Profemur*: **19** – surface – (0) punctured, (1) scabrous; **20** – anterior marginal groove – (0) deep, (1) shallow. *Metafemur*: **21** – posterior marginal line – (0) absent, (1) present. *Metatibia*: **22** – external apical process – (0) setiform, (1) spiniform; **23** – inner row of denticles – (0) absent, (1) present. *Metatarsus*: **24** – basal tarsomere to four tarsomeres – (0) shorter, (1) equal.

Table I

Character matrix for the cladistic analysis of *Ataenius imbricatus*-group

Taxa	Characters	.....	....1	11111	11112	2222
		12345	67890	12345	67890	1234
<i>Ataenius aequalis</i>		00000	00000	00000	00000	0000
<i>Ataenius imbricatus</i>		11011	01111	10100	01100	1000
<i>Ataenius alternatus</i>		11011	01010	01111	00110	0101
<i>Ataenius schmidtii</i>		11100	01111	10100	00000	1100
<i>Ataenius petrovitzi</i>		11011	01110	10010	00010	1101
<i>Ataenius imbricatoides</i>		11100	01110	11110	00010	1000
<i>Ataenius tuberculatus</i>		11011	11101	11110	11000	1100
<i>Ataenius luctuosus</i>		11011	01111	11111	00110	0101
<i>Ataenius carinatipennis</i>		00001	01010	10101	10000	1000
<i>Ataenius scabrelloides</i>		11001	01100	10000	01010	0000
<i>Ataenius impressus</i>		11011	11100	11101	00110	1100
<i>Ataenius morator</i>		01001	00011	00100	00000	1101
<i>Ataenius stercorator</i>		01001	00011	00100	00000	1111
<i>Ataenius siminasus</i>		10001	01010	10101	10001	1000
<i>Ataenius pseudostercorator</i> <b>sp. n.</b>		11011	11111	10100	01111	1111
<i>Ataenius scabrellus</i>		01001	01110	10101	00000	1101
<i>Ataenius miamii</i>		01001	01110	10101	00000	1101
<i>Ataenius balthasari</i>		11011	01111	10100	01100	1000
<i>Ataenius holopubescens</i>		11000	01101	11100	01010	1100
<i>Ataenius superficialis</i>		11001	01110	10000	00100	1100

Nineteen species of *Ataenius imbricatus*-group were included as ingroup, characters were polarized using *Ataenius aequalis* HAROLD as outgroup. The character matrix was operated in WINCLADA (NIXON 1999) with heuristic tree search performed in NONA (GOLOBOFF 1993). The 23 trees were generated and examined using fast optimization ACCTRAN. The most parsimonious cladogram displaying the character state changes with statistics L=66, CI=36, RI=57, is presented in Fig. 1.

The character mapping shows reversals in many species. Synapomorphies for *imbricatus*-group are: the widely rounded clypeal margin (char. 2), the head with punctures forming longitudinal lines (char. 5), the elytral striae finely punctured (char. 13), the metafemur lacking posterior line (char. 21) and the metatibia apically with spiniform external process (char. 22). The first dichotomy in the

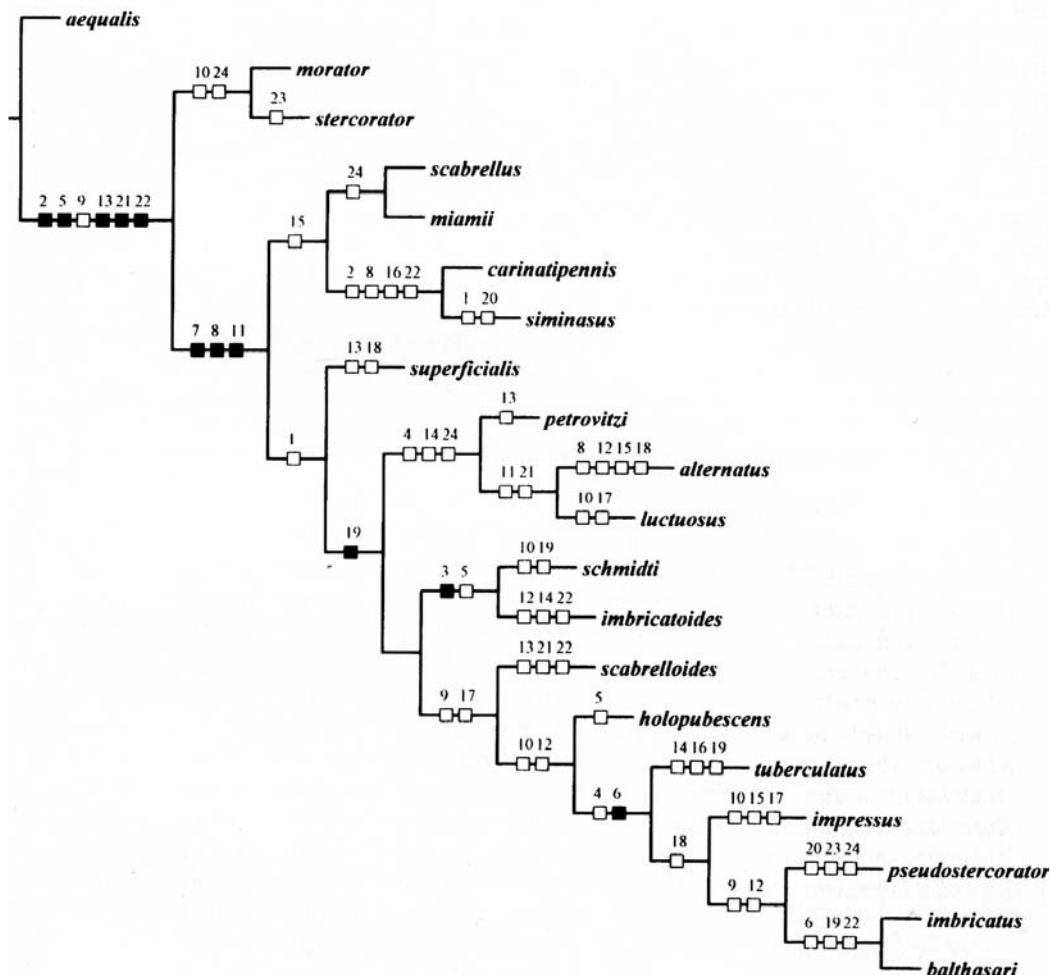


Fig. 1. Cladogram depicting hypothetical relationships among members of *Ataenius imbricatus*-group with *A. aequalis* HAROLD as outgroup. Numbering of characters corresponds to that in the character matrix (Table 1).

cladogram, separating *A. stercorator* + *A. morator* from the rest, has weak support and both species seem to form a subgroup in the clade. They differ from all other species by having the uncoated body and the base of pronotum distinctly margined (char. 7). The latter character (base of pronotum without marginal line) is a synapomorphy for the main clade, as well as character 11 – surface of elytra in most species setose, and character 8 – the pronotum in most species setigerous. A single synapomorphy supports the nodes formed by *A. schmidtii* + *A. imbricatoides* sharing very narrow, not prominent genae (char. 3). The scabrously sculptured surface of protibia (char. 19) and unevenly convex surface of the pronotum (char. 6) are synapomorphies that support the nodes formed by species characterized by mosaic of the character states, but satisfactorily combined in this clade according to their external similarity. Autapomorphies were excluded from the analysis.

Key to the species of *Ataenius imbricatus*-group

- 1 Body entirely or partially covered with argillaceous coating or oily dirt; base of pronotum without marginal line. . . . . 2
- Body without coating, opaque; base of pronotum with conspicuous marginal line . . . . . 18
- 2(1) Elytral intervals alternately higher . . . . . 3
- Elytral intervals not alternately higher . . . . . 7
- 3(2) Disc of pronotum unevenly convex, tuberculate or slightly swollen. . . . . 4
- Disc of pronotum evenly convex, without swellings. . . . . 6
- 4(3) Elytral intervals 3, 5, 7 with black, shiny tubercles and granules . . . . . *A. tuberculatus* SCHM.
- Elytral intervals 3, 5, 7 without tubercles and granules . . . . . 5
- 5(4) Elytral intervals 3, 5, 7 tectiform, finely carinate medially; protibia with two lateral teeth and spine-like tooth in anterior margin. . . . . *A. impressus* PETR.
- Elytral intervals 3, 5, 7 convex, tapering without carina medially; protibia with three lateral teeth, anterior tooth lacking . . . . . *A. petrovitzi* BALTH.
- 6(3) Surface of body entirely covered with coating; elytral intervals 3, 5, 7, 9 tectiform, carinate medially, elytral pubescence inconspicuous . . . . . *A. alternatus* (MELSH.)
- Surface of body partially covered with coating; elytral intervals 3, 5, 7 subcarinate medially, elytral setae conspicuous, erect . . . . . *A. luctuosus* (BURM.)
- 7(2) Elytra parallel-sided . . . . . 8
- Elytra arcuate . . . . . 14
- 8(7) Pronotum obliquely concave midway to sides . . . . . 9
- Pronotum with smooth midline and uncoated spot midway to sides . . . . . 10
- 9(8) Length 4.8-5.5 mm; clypeus widely rounded on each side of median emargination; elytral intervals weakly convex or flat; inner side of metatibia with row of setigerous denticles . . . . . *A. pseudostercorator* sp. n.
- Length 3.0-3.2 mm; clypeus subangulate on each side of median emargination; elytral intervals carinate; inner side of metatibia without denticles . . . . . *A. siminasus* PETR.
- 10(8) Head uncoated, glabrous, gena truncate not exceeding eye . . . . . *A. schmidtii* nom.n.
- Head usually covered with coating, setigerous, gena more or less exceeding eye . . . . . 11
- 11(10) Head and pronotum with shallow areolate sculpture . . . . . 12
- Head and pronotum more or less roughly punctate . . . . . 13
- 12(11) Elytral striae shallow, punctures inside inconspicuous; elytral intervals 3, 5, 7 with two rows of short, curly setae. . . . . *A. imbricatoides* SCHM.
- Elytral striae deep, punctures inside distinct; all elytral intervals with single row of stubby setae . . . . . *A. scabrelloides* PETR.
- 13(11) Clypeal margin widely rounded on each side of median emargination; disc of pronotum dull with nearly contiguous punctures. . . . . *A. imbricatus* (MELSH.)
- Clypeal margin subangulate on each side of median emargination; disc of pronotum shiny, punctures separated by about one diameter . . . . . *A. balthasari* PETR.
- 14(7) Elytral intervals flat or weakly convex . . . . . 15
- Elytral intervals tectiform, subcarinate medially . . . . . 16
- 15(14) Head minutely alutaceous, moderately shiny, finely punctate; elytra ovoid, lobed apically . . . . . *A. holopubescens* HINT.
- Head dull with fine to coarse punctures uniting laterally to form lines; elytra suboval, rounded apically. . . . . *A. superficialis* CARTW.
- 16(14) Elytral intervals with median ridge broken into small, elongate granules . . . . . *A. carinatipennis* PETR.
- Elytral intervals with smooth median elevation . . . . . 17
- 17(16) Basal punctures of pronotum only slightly larger than those in anterior median area; median ridge of elytral intervals usually rounded . . . . . *A. miamii* CARTW.
- Basal punctures of pronotum crowded and twice larger than those of anterior median area; median ridge of elytral intervals usually acute . . . . . *A. scabrellus* SCHM.
- 18(1) Length 5.0-6.0 mm; punctures of pronotal disc minute to fine; meso- and metatibiae with row of setigerous denticles at inner side . . . . . *A. stercorator* (F.)
- Length 3.8-4.2 mm; punctures of pronotal disc fine to moderate; meso- and metatibiae without setigerous denticles at inner side . . . . . *A. morator* HAR.



*Ataenius imbricatus* (MELSHEIMER)

(Figs 2, 3)

*Aphodius imbricatus* MELSHEIMER, 1844: 136.

*Ataenius imbricatus*: GEMMINGER & HAROLD 1869: 1066; HORN 1887: 75; SCHMIDT 1922: 443; CHAPIN 1940: 20; PETROVITZ 1962: 131; WOODRUFF 1973: 120, figs 255-256; CARTWRIGHT 1974: 28-30, fig. 7; DELLACASA 1988: 141 (catalogue).

*Ataenius sordidus* HAROLD, 1869: 103.- HORN 1887: 75 (as synonym of *imbricatus*). CARTWRIGHT 1974: 28 (as synonym of *imbricatus*).

Type data. *Aphodius imbricatus*: described from "Pennsylvania". Holotype in MCZ.

Material examined. *Ataenius sordidus*: lectotype (Brazil, Macejo) designated by CARTWRIGHT (1973), in MNHN.

Other specimens ( 952). **Argentina** – Prov. Formosa, 50 km NW Clorinda; Rio Pilcomayo; Prov. Santa Fe, Dpto Capital (CMN, HAHC). **Belize** – Cayo, distr. San Ignacio (USNM). **Brazil** – (MT) Mato Grosso, Corumba (ISEA, MHNG, SMTD, ZMHB); (MA) Aguas Vermelhas (FVMC); (Ba) Mucuri, Caravelas (USNM). **Colombia** – Cartagena, Santa Marta (ZMHB). **Costa Rica** – Guanacaste; Cañas; Puerto Viejo; Heredia (HAHC, SMNS). **El Salvador** – San Vicente. **Guatemala** – Zacapa; Rio Hondo; Quezalten (CMN, HAHC, ISEA). **Guyana Br.** – Ituni. **Honduras** –

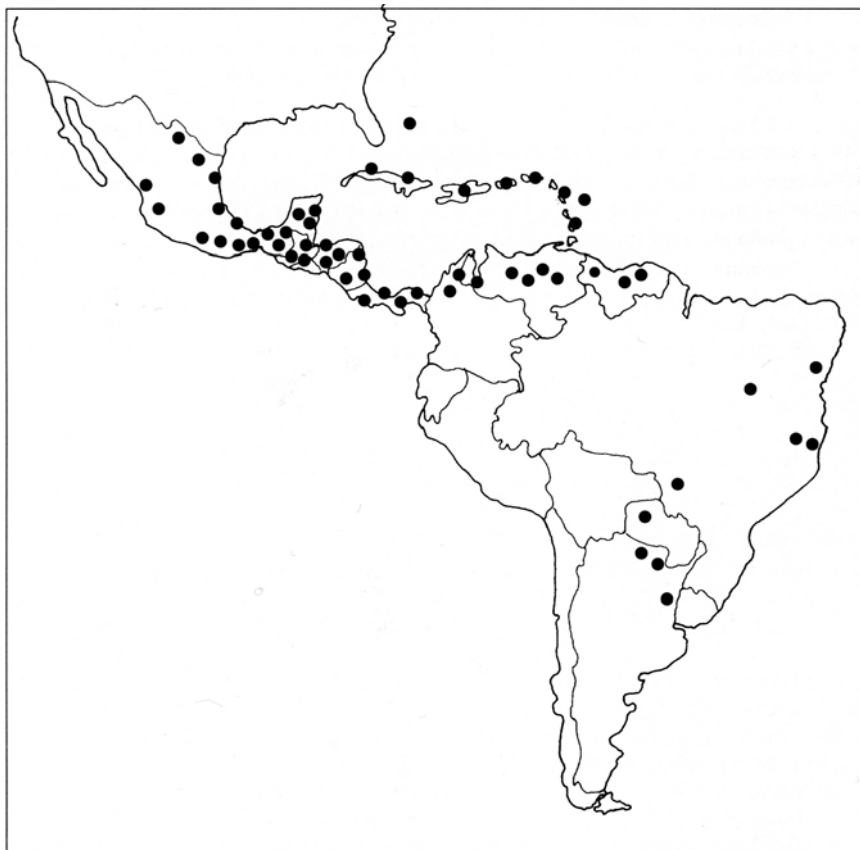
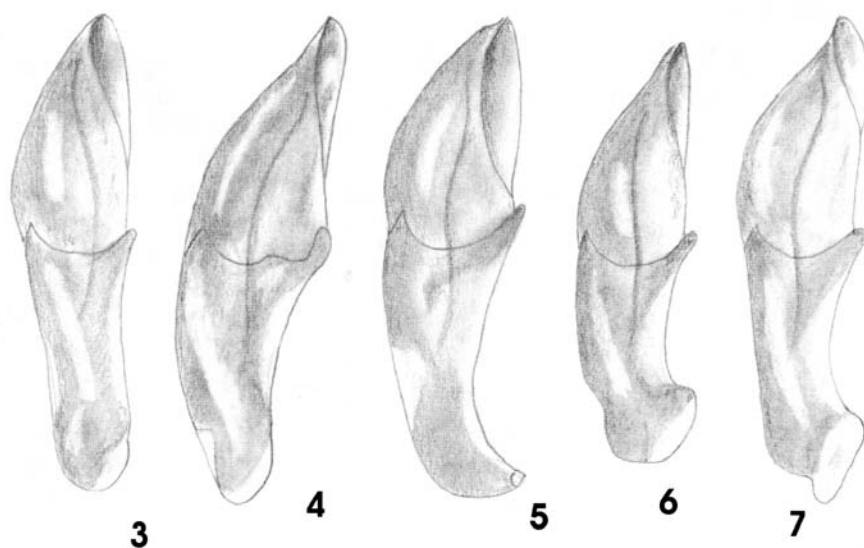


Fig. 2. Known distribution of *Ataenius imbricatus* (MELSH.) in Central and South America (for distribution in North America: see WOODRUFF 1973, figs 255-256; CARTWRIGHT 1974, fig. 7).

Paraíso; Danli; Morazan (HAHC), Atlantida, Salado Barra; Montaña del Malacate (UNSM). **Mexico** – Nayarit, Tepic; (ZMHB); Veracruz, Los Tuxtlas, Jalapa; Oaxaca, Zapilote; SLP Tamazunchale; Sinaloa, Mazatlan; Yucatan, Quintana Roo, Chichenitza, Playa del Carmen; Guerrero, Chilpancingo; Chiapas, Cinco Cerros; El Aguacero (CMN, HAHC, ISEA, RTC). **Nicaragua** – Momotombo 1000-1500 m. (HAHC). **Panama** – Canal Zone, Chiriqui, Madden Forest; Bocas del Toro (RMC, RTC, UNSM). **Paraguay** – Dep. Boque con Chaco (ISEA). **Surinam** – La Poulle; Paramaribo (HNHM, USNM). **Venezuela** – Maracaibo; Bolivar; Cotaxtla; Bolivar, 15 km E of Caicara; Bolivar, Guri. **USA** – Bahamas (wider distribution in United States see Cartwright 1974, fig. 7). **West Indies** – Cuba; Dominican Rep., Puerto Rico, St Croix, Guadeloupe, Trinidad, Barbados (CMN, HAHC, USNM). Specimens collected in all months.

**Diagnostic characters.** Length 3.8-4.5 mm. Body dull, piceous or reddish piceous, entirely covered by argillaceous coating or/and oily dirt. Head with minute setae on sides, clypeal emargination shallow, gena moderately prominent; surface along emargination narrowly shiny, punctures above become gradually denser, confluent laterally, in some specimens rough and very dense. Pronotum convex, setose on sides, lateral edge crenate, marginal setae flattened, sometimes enlarged or spatulate apically; surface punctures coarse, disc in some specimens with slight bare areas in posterior half. Elytra parallel-sided or very slightly arcuate, striae impressed, stria punctures indistinct, usually completely covered with coating; intervals flattened or slightly convex with row of short, truncate setae, lateral intervals not different. Metasternum shiny with moderate punctures on disc; abdominal sternites opaque, closely punctate from side to side, with rather fine fluting along sutures. Femora punctate with minute setae, metafemur with complete posterior line; metatibia slender; basal tarsomere of metatarsus longer than upper tibial spur and shorter than following tarsomeres together. Male genitalia as in Fig 3.

**Remarks.** Variation in this species is very advanced, occurs mainly in the shape and sculpture of the body and in details of the male genitalia; some series of specimens have the punctures of head and pronotum coarser than in the typical specimens, some have the elytra with longer and closer setae. *Ataenius imbricatus* bears an overall similarity to *A. balthasari*, to *A. schmidtii* and to *A. scabrelloides*, but differs from these species by the characters given in the key. It is one of the most



Figs 3-7. Male genitalia, aedeagus in lateral view: 3 – *Ataenius imbricatus* (MELSH.), 4 – *A. scabrellus* SCHM., 5 – *A. holopubescent* HINT., 6 – *A. tuberculatus* SCHM., 7 – *A. impressus* PETR.



common and widely distributed species in North America (see WOODRUFF 1973, figs 255-256; CARTWRIGHT 1973, fig. 7) and Central and South America (Fig. 2). The specimens were collected throughout the year mostly at lights in various habitats.

***Ataenius balthasari* PETROVITZ**

(Fig. 27)

*Ataenius balthasari* PETROVITZ, 1973: 163-165.- DELLACASA 1988: 272 (catalogue).

Material examined. Holotype (sex undetermined) and 4 paratypes labelled 'Corumbá, Mato Grosso, coll. MUCHE', '*Ataenius balthasari* PETROVITZ, in MHNG.

Other specimens (8) – **Brazil** – (MT) Mato Grosso, Corumbá, coll. MUCHE (SMTD, ZMHB).

**D i a g n o s t i c c h a r a c t e r s.** Size of body and other features as in *A. imbricatus*, differentiating characters are as follows: head relatively larger than in *imbricatus*, with slightly angulate clypeal margin; disc of pronotum without coating, slightly shiny, punctures less close, separated by about one diameter; elytra relatively longer than in *imbricatus*.

**R e m a r k s.** It is not excluded, that *Ataenius balthasari* is one of the local populations of extremely variable *A. imbricatus* found exclusively on one stand in Mato Grosso (Fig. 27). The male genitalia of both species do not differ in shape. The specimens examined belong to the same series as holotype and bear no date of collecting.

***Ataenius scabrellus* SCHMIDT**

(Figs 4, 8-10, 12)

*Ataenius scabrellus* SCHMIDT, 1909b: 118.- 1922: 444-445; DELLACASA 1988: 280 (catalogue).

*Ataenius havanensis* BALTHASAR, 1938: 56. - HOWDEN 1970: 2; WOODRUFF 1973: 119, fig. 254; CARTWRIGHT 1974: 33-34, fig. 10; CHALUMEAU & GRUNER 1974: 807; CHALUMEAU 1983: 75, fig. 39; DELLACASA 1988: 275 (catalogue). **New synonymy.**

*Ataenius miamii*: CHAPIN 1940: 41 (not CARTWRIGHT 1934:200).

*Ataenius fleutiauxi* PAULIAN, 1947: 42- CARTWRIGHT 1974: 33 (as synonym of *havanensis*).

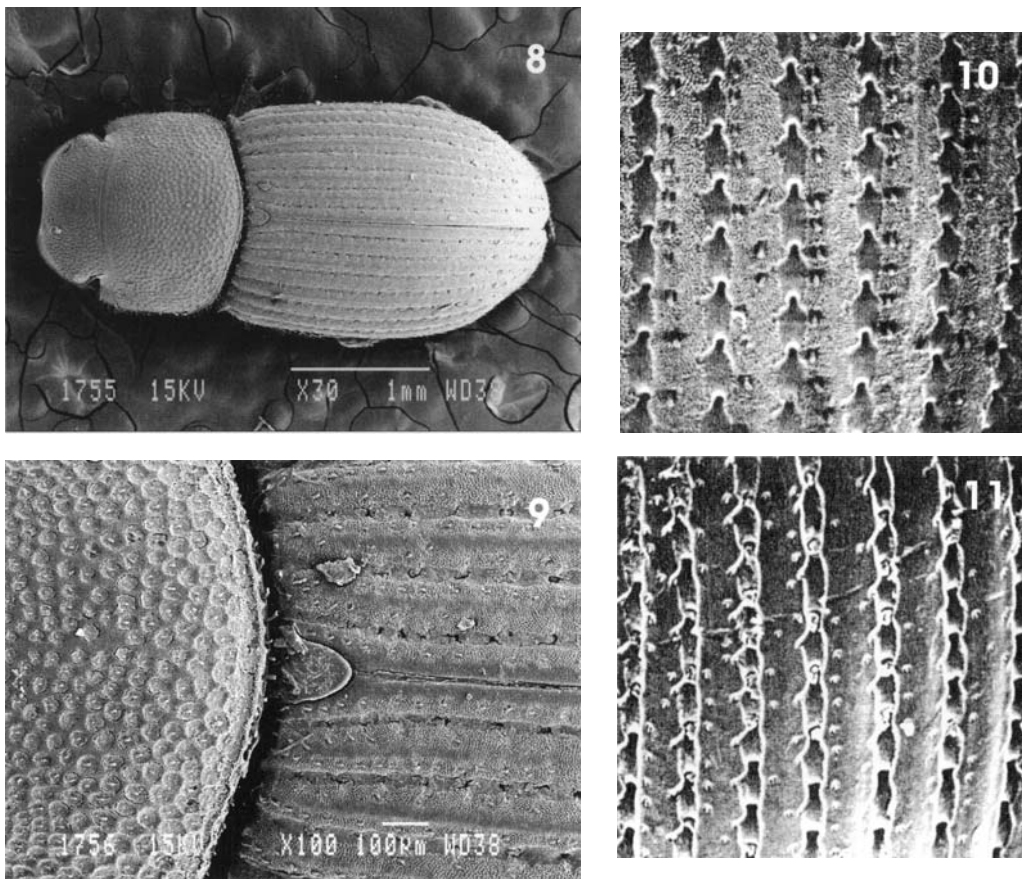
Material examined. *Ataenius scabrellus*: Lectotype female (here designated), labelled „Co-type”, „La Guayra”, Lectotype det. CHALUMEAU '78" (invalid designation), with author's label "Lectotype", "*Ataenius scabrellus* SCHM., Dt.Z. STEBNICKA", in NRS. Paralectotypes (4), labelled "Typus", La Guayra Moritz nr 26123", "*Ataenius scabrellus* SCHM. Dt.Z. STEBNICKA", in ZMHB. *A. havanensis*: lectotype (Cuba, Havana) designated by CARTWRIGHT (1973), in DEIE. *A. fleutiauxi*: holotype (sex not determined) labelled "Guadeloupe", in MNHN.

Other specimens (275). **Guyana Br.** – East Demerata, West Coast Bartica Distr. Georgetown, I. 1983 (at botanical garden and zoo), M. E. STEINER (USNM). **Venezuela** – Sucre, Pen. De Araya, 7 km E Caimancito, 27.VII.1987, S. & J. PECK (CMN). **West Indies** - Cuba, Havana (MHNG). Dominican Rep. – Boca Chica, San Pedro, 13 km E Boca Chica, 27.V.1992, R. TURNBOW (FSCA, JWC, RTC); Boca Chica, 21.IX.1971, J. KLAPPERICH (CMN). Jamaica – Try Duncans, 5.VII.1966, H. & A. HOWDEN (HAHC); St Thomas Bath Fountain, 13.VII.1974, S. & J. PECK; 24.VII.1960, H. & A. HOWDEN (CMN). Puerto Rico – La Parguera, 28.VII.1969, H. & A. HOWDEN (HAHC); Guadeloupe – Anse à la Bargue, 7.IX.1975, F. CHALUMEAU (ISEA); St Kitts, Dasseterre, 8-30.IX.1985, L. D. COOTE (CMN). **USA** – Bahamas – Andros Is, Mennenite's Farm, 30.VII.1987, H. & A. HOWDEN; 5 mi S Old Logging Road, Gobi Lake, 9.VII.1987; Barc, 27.VII.1987, J. BROWNE; Man-O-War Cay near Abaco, 15-24.VIII.1971, H. & A. HOWDEN (CMN, HAHC). Florida – Stock Island, Monroe Co. (USNM).

**D i a g n o s t i c c h a r a c t e r s.** Length 3.5-4.2 mm. Body (Fig. 8 ) elongate oval, black or greyish black. Clypeal margin broadly rounded on each side of broad median emargination, gena prominent; surface of head anteriorly narrowly shiny, then gradually finely punctate to

upper fourth, laterally with lines of united punctures. Pronotum (Fig. 9) convex, sides and base crenate, lateral fringe of fine truncate setae; surface densely, shallowly setigerously punctate, punctures practically contiguous from anterior angles around and over basal half of pronotum, less close and gradually smaller to median anterior disc; in some specimens base of pronotum with very fine marginal line but usually line invisible. Elytra oval, striae deep, sometimes covered with oily dirt; intervals (Fig. 10) tectiform, inner slopes slightly alutaceous, outer slopes with row of short recurved setae, lateral intervals not different. Metasternum with deep midline, disc coarsely punctate; abdominal sternites with punctures similar to those of metasternum. Profemur moderately closely, setigerously punctate; meso- and metafemora finely punctate, metafemur with strong, complete marginal line; basal tarsomere of metatarsus longer than upper tibial spur and subequal to following tarsomeres combined. Male genitalia as in Fig. 4.

**R e m a r k s.** *Ataenius scabrellus* is superficially very close to *A. miamii*, but is noticeably different in direct comparison (see Remarks under *A. miamii*). The species is widely distributed from Venezuela throughout West Indies to Florida (Fig. 12), recorded under the name "*havanensis*" from St Croix, St Kitts and Barbados by CHAPIN (1940), from Jamaica (Duncans) by HOWDEN (1970) and from Martinique, Desirade and Les Saintes by CHALUMEAU (1983). The species was commonly collected to black light traps on coastal areas, found in the freshwater marsh communities, in rain forest and orchard edges, under beach debris and *Casuarina* needles.



Figs 8-11. 8-10 – *Ataenius scabrellus* SCHM.: 8 – habitus, 9 – pronotum and elytra, 10 – sculpture of elytra; 11 – *A. miamii* CARTW., sculpture of elytra.

*Ataenius miamii* CARTWRIGHT

(Figs 11, 12)

*Ataenius miamii* CARTWRIGHT, 1934: 200.- CHAPIN 1940: 22-23 (as synonym of *havanensis*); CARTWRIGHT 1941: 33; WOODRUFF 1973: 122-123, figs 264-265; CARTWRIGHT 1974: 31-33, fig. 9; DELLACASA 1988: 277 (catalogue).

Type data. Holotype: Miami, Florida, No 50764 USNM.

Material examined. Paratypes (3): USA, Miami, Florida, 21.VIII.1933, F. N. YOUNG; Clemson S.C., 30.VIII.1940, O. L. CARTWRIGHT, in HNHM, ZMHB.

Other specimens (6). USA – 2 specimens labelled as “Metatypes”: Florida, Destin Beach, 22.VIII.1930, F. N. YOUNG (ZMHB); Clemson S.C., 30.Aug.1940, O. L. CARTWRIGHT (ISEA). Grand Bahama Island – Xanadu Beach, 27.X.1995, W. E. STEINER & J. M. SWEARINGEN (ISEA, USNM).

**D i a g n o s t i c c h a r a c t e r s .** Length 3.3-4.2 mm. Body oval, convex, dull, often with oily coating. Clypeal margin broadly rounded on each side of moderately deep median emargination, surface narrowly shiny and impunctate along margin, then elsewhere more or less densely punctured, punctures laterally coalesce into short longitudinal lines. Pronotum convex, marginal setae short, surface punctures dense, shallow, moderately coarse, minutely setigerous, especially on sides. Elytra convex, oval; striae deep, stria punctures fine; intervals tectiform or sub-

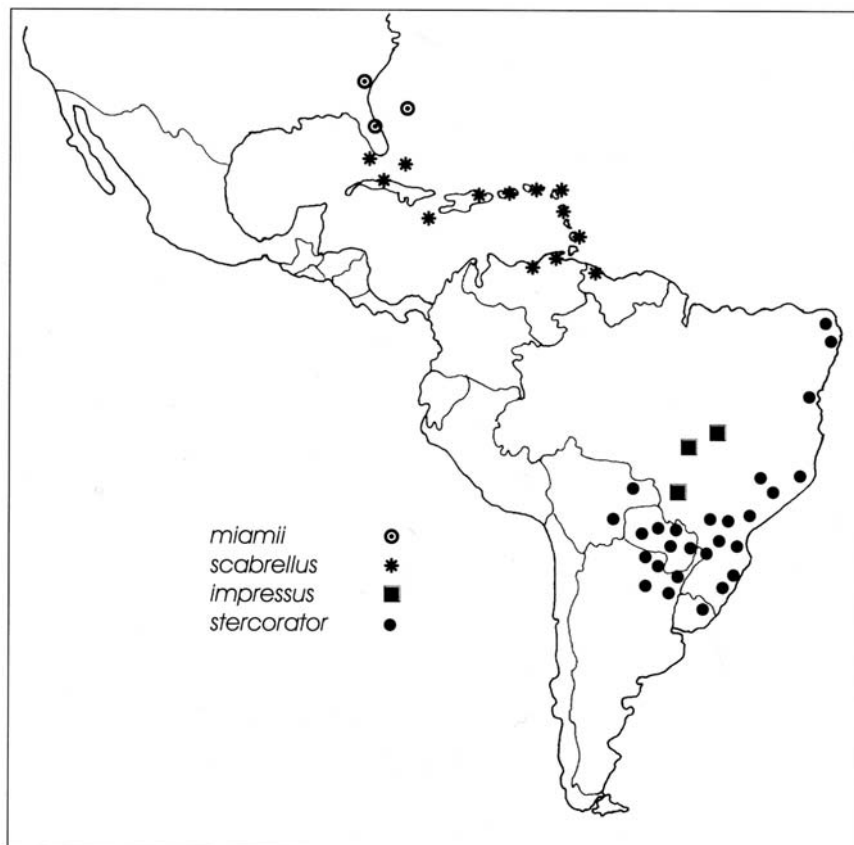


Fig. 12. Known distribution of *Ataenius scabrellus* SCHM., *A. impressus* PETR., *A. stercorator* (F.) and *A. miamii* CARTW. (distribution of *A. miamii* in North America: see CARTWRIGHT 1974, fig. 9).

carinately convex (Fig. 11) outer margin of interval with row of short, semierect, sometimes inconspicuous setae. Ventral surface alutaceous, metasternum with scattered, shallow punctures, abdominal sternites rather closely punctate. All femora with setigerous punctures, metafemur with complete posterior line; basal tarsomere of metatarsus longer than upper tibial spur and subequal to following tarsomeres together. Male genitalia similar to those of *A. scabrellus* (Fig. 4).

**R e m a r k s.** *Ataenius miamii* is a sister species of *A. scabrellus*. It differs from that species by having the pronotal punctures nearly uniform in size and less close than in *scabrellus* in which the basal punctures of the pronotum are practically contiguous and twice the size of those anteriorly; the elytral setae in *miamii* are finer and shorter and the intervals more evenly rounded (Figs 10, 11). The species is distributed in eastern United States (see WOODRUFF 1973, fig 264-265 and CARTWRIGHT 1974, fig. 9), and the ranges of both sister species overlap only in Florida (Fig. 12). The species occurs on coastal and other sandy stands near water; according to WOODRUFF (1973) most of the Florida specimens were taken from a swimming pool.

***Ataenius scabrelloides* PETROVITZ**

(Figs 13-16, 17)

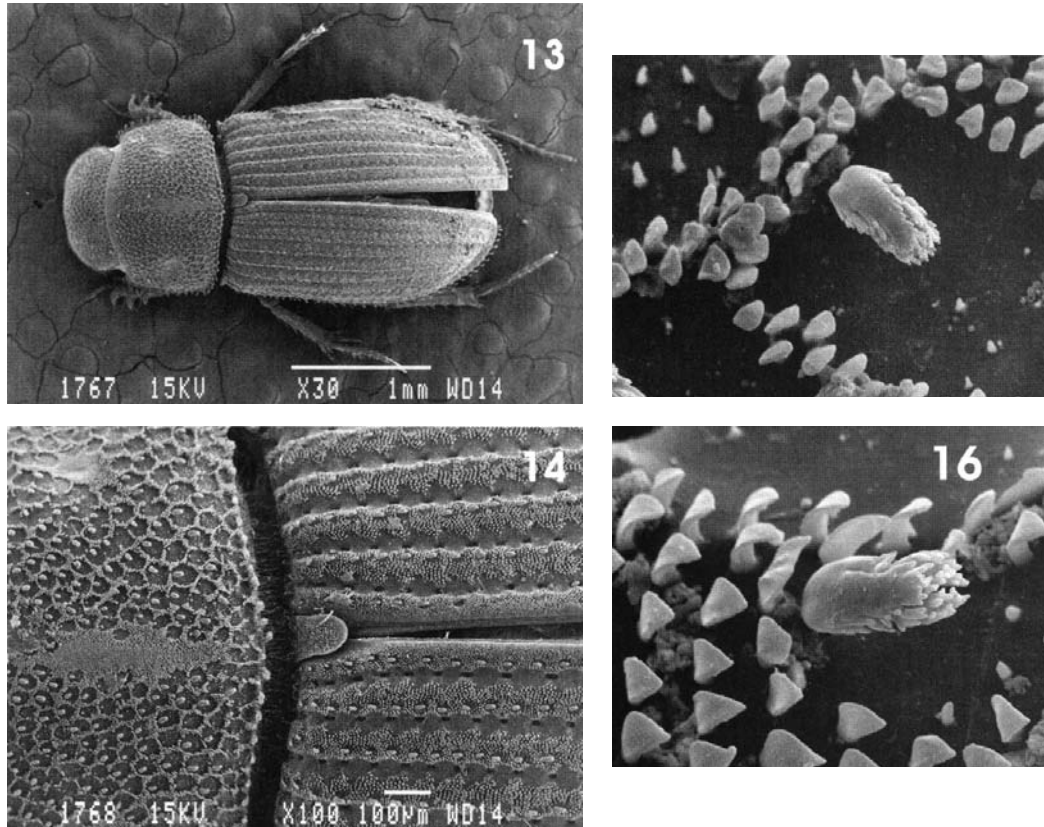
*Ataenius scabrelloides* PETROVITZ, 1962: 131 (named in litteris by A. SCHMIDT).- DELLACASA, 1988: 280 (catalogue).

Material examined. Holotype (sex undetermined) and 3 paratypes, labelled 'Mato Grosso, Corumbá, Brazil', '*Ataenius scabrelloides* PETROVITZ, in MHNG.

Other specimens (254). **Bolivia** – Santa Cruz, Buena Vista, 380 m, 20.II.1999, L. STANGER (PSC); Guayaramerin (Beni), Mamore River, 1.XII.1966, BALOGH & MAHUNKA & ZICSI (HNHM). **Brazil** – (MT) Mato Grosso, Corumbá, W. H. MUCHE (SMTD); Varzea Grande Co., Cuiabá, 20.IV.1972, W. H. WHITCOMB (FSCA); Jacare, Nat. Park Xingu, XI.1965, M. ALVARENGA (USNM); (MG) Aguas Vermelhas, XII.1997, F. VAZ de MELLO (FVMC); (MS) Corumbá, Nhimirim Farm, VIII.1992, C. FLECHTMANN (CFC); (Go) Coronel Ponce, 6.III.1979, C. R. OWEN (ISEA); (Pi) Piauí Teresina, I.1953, leg. OLIVEIRA; (PE) Recife; (MA) Pedrinhas, 9.VIII.1984, leg. BERGMANN (CFC); (ES) Linhares, X.1971, F. PLAUMANN (USNM); (BA) Mucuri, III.1997, F. VAZ de MELLO (FVMC); Caravelas, III.1996, R. DINIZ; Pedro Canario, V.1997, R. DINIZ (FVMC). **Costa Rica** – Puerto Viejo, 3.IV.1987, M. & V. GAJEK (SMNS). **Guyana (Fr.)** – Matoury Lac, 13.XII.1979, F. CHALUMEAU (ISEA); (**Br.**) Pirara Ranch, IV.1974, L. STANGER; E Demerata, West Coast, Bartica distr. Georgetown, I.1983, M. E. STEINER (USNM); Ituni, 1-2.VII.1970, B. FENTON (CMN). **Panama** – Canal Zone, Gulick, 28-31.V.1961, H. J. HARLAN (ISEA); Panama, 2.5 km W Ipeti, 11.V.1986; Chiriqui, Chiriquito, 16.V.1986, R. TURNBOW; Cocle Altos de Campana, 13.V.1996, R. TURNBOW (RTC). **Surinam** – La Poule, VIII.1959, coll. ENDRÖDI (HNHM). **Venezuela** – Bolívar, Guri, 14.VI, 11.VII.1996; 25 km E of El Palmar, 16-18.VI.1996; 12 km E of Caicara, 12-13.VI.1996, Bolívar, 22 km E Upata, 18-19.VI.1996, H. & A. HOWDEN (HAHC); Guarico, 15 km S Calabozo, 9-13.II.1969, P. & P. SPANGLER (USNM); Bolívar, 35 km N Las Trincheras; Bolívar, 15 km N Corocito; Bolívar, Chehivero, 30 km SE Caicara; Bolívar, Parupa, Gran Sabana 1500 m, VI-VII.1996, H. & A. HOWDEN (CMN, HAHC). **West Indies** – Trinidad, Balandra Bay, 9.VIII.1969 H. & A. HOWDEN (HAHC).

**D i a g n o s t i c c h a r a c t e r s.** Length 3.0-3.8 mm. Body (Fig.13) oblong oval, entirely or partially covered with greyish argillaceous coating or oily dirt; colour dark brown to piceous, in freshly emerged and uncoated specimens reddish brown or castaneous, slightly shiny. Head relatively small, clypeal margin narrowly reflexed, rounded on each side of narrow, deep median emargination, gena rounded, only slightly prominent; surface everywhere with areolate, shallow, laterally minutely setose structure that is invisible in strongly encrusted specimens. Pronotum (Fig. 14) transverse, lateral margin slightly reflexed, fringed with moderate in length, clavate or spatulate setae separated by less than their length; anterior angles slightly deplanate, lateral tumosity conspicuous, sometimes with shallow depression behind, in most specimens dark smooth mid-





Figs 13-16. *Ataenius scabrelloides* PETR.: 13 – habitus, 14 – pronotum and elytra (magnification 100x), 15, 16 – microsculpture of pronotum (magnification 1500x-2000x).

line occurs over posterior half and dark, uncoated spot midway to side; surface with similar, areolate structure as that on head, under magnification 100x (Fig. 14) appearing as shallow setigerous punctures; under magnification 1500-2000x (Figs 15-16), areolae are formed by triangular scales surrounding a single, unusually shaped sensillum. Elytra convex, slightly arcuate, marginal setae truncate, separated by their length or more; striae deep, punctures inside distinct; intervals weakly convex or flat, each interval with single row of upright, stubby setae on outer side. Ventral surface alutaceous; metasternum, femora and abdomen finely setose; metasternal midline impressed, disc finely punctate, punctures of abdomen same size and density as those on metasternum, fluting of sternite 4-5 deep. Metafemur longer than mesofemur, surface punctures less dense, posterior line short and inconspicuous or absent; basal tarsomere of metatarsus longer or subequal to upper tibial spur and shorter than following tarsomeres combined. Male genitalia have no distinct differences from those of *A. imbricatoides* (Fig. 37).

**R e m a r k s.** *Ataenius scabrelloides* is most similar externally to *A. imbricatus* and *A. imbricatoides*. It can be distinguished from *imbricatus* by its smaller head with deeper clypeal emargination and by the areolate structure of the head and pronotum, from *imbricatoides* it differs by the structure of elytra. The specimens were collected to black light traps in woodland and grassland areas, taken from horse dung. Species widely distributed in South America (Fig. 17).

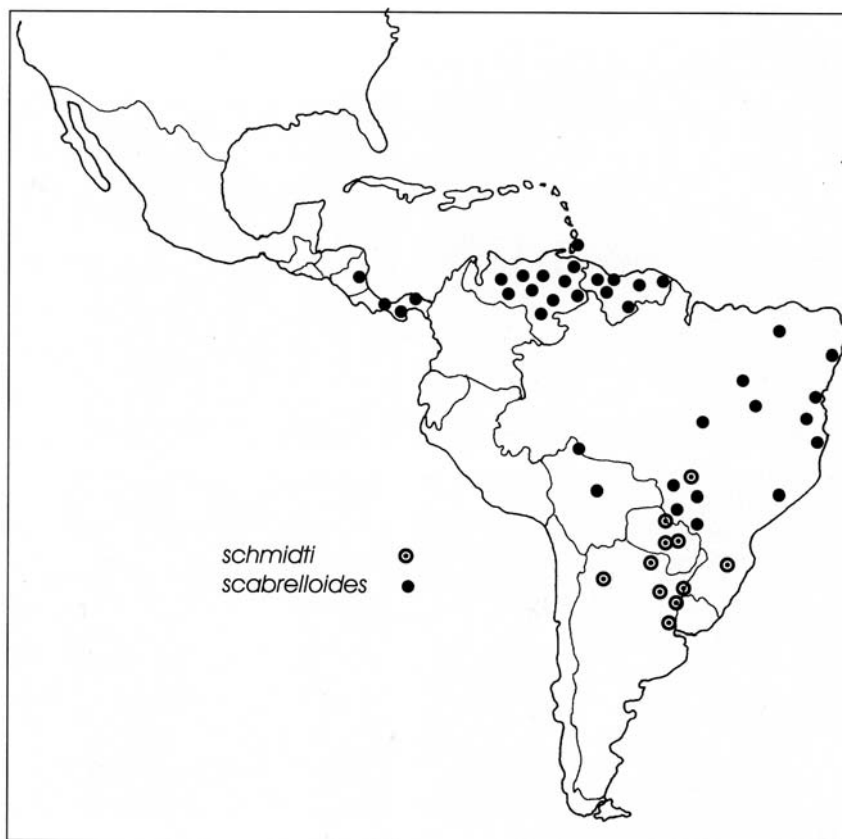


Fig. 17. Known distribution of *Ataenius schmidti* nom. n. and *A. scabrelloides* PETR.

*Ataenius holopubescens* HINTON

(Figs 5, 23-24, 27)

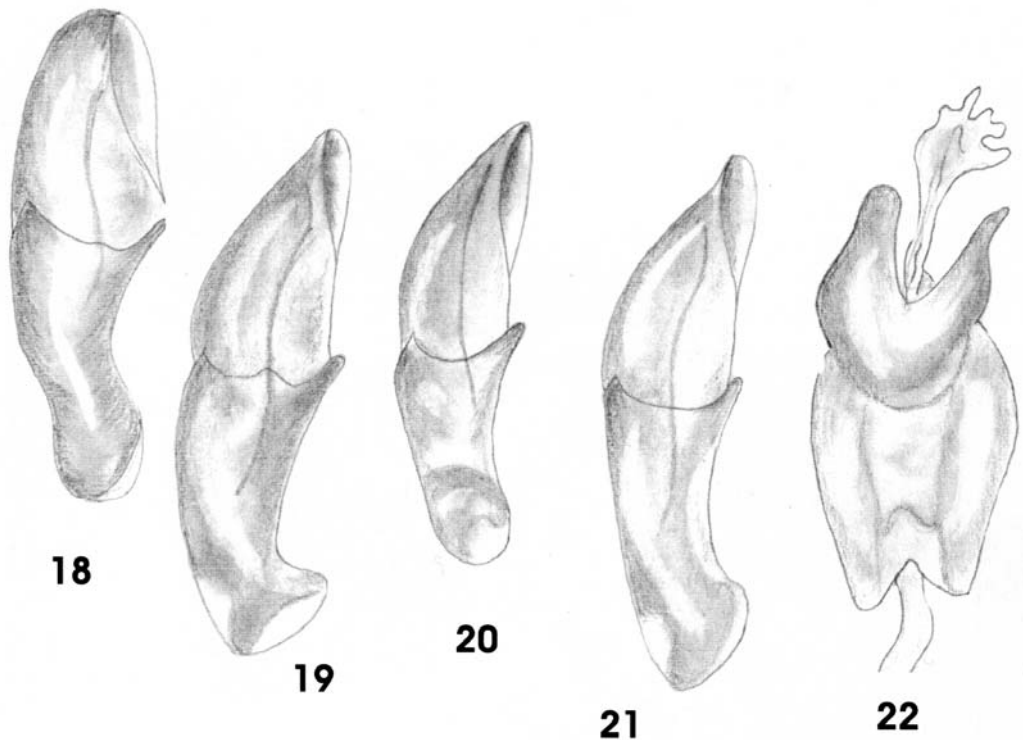
*Ataenius holopubescens* HINTON, 1938: 124-125, figs 5-8.- DELLACASA 1988: 275 (catalogue).

Material examined. Holotype male, labelled "Mexico, Tejupilco VII.1934 H. E. HINTON", in USNM.

Other specimens (21). **Guatemala** – El Progreso, 12 km N Est. La Virgen, 1400 m, 15.VI.1991, H. & A. HOWDEN (CMN). **Mexico** – Guerrero, Acahuizotla, 19.VI.1986, A. C. DELOYA (ISEA); Chiapas, El Aguacero 16 km W Ocozocautla 680 m, 5.VI.1990, H. & A. HOWDEN; Cinco Cerros, 860 m, 9.VI.1990, H. & A. HOWDEN (HAHC); Mpio Cintalapa 5 mi N Tenoctitlan, 31.VII.1991, KOVARIK & PHILIPS (FSCA); San Luis Potosi, C-d Valles, Palma Hotel, 8-23.VII.1969, S. & J. PECK (CMN, HAHC).

**Diagnostic characters.** Length 3.5-3.8 mm. Body (Fig. 23) dark castaneous or reddish brown, partially covered with coating. Head usually uncoated, slightly shiny, feebly convex; clypeal margin rounded on each side of deep, narrow median emargination, gena prominent; surface with fine, seta-bearing punctures separated by more than their diameter. Pronotum strongly convex, side widely rounded towards truncate and slightly excised posterior angles, margin fringed with moderate in length, clavate or spatulate setae; surface strongly alutaceous, setigerous punctures fine and shallow, usually covered with dirt. Elytra ovoid, slightly deplanate discally and lobed apically, humeral denticle moderate in size, acute, marginal setae short, truncate, sepa-





Figs 18-22. Male genitalia: 18-20, aedeagus in lateral view, 18 – *Ataenius pseudostercorator* sp. n., 19 – *A. petrovitzi* BALTH., 20 – *A. luctuosus* (BURM.); 21, 22 – *A. alternatus* (MELSH.): 21 – aedeagus in lateral view, 22 – phallus, ventral view.

rated by their length; striae impressed, punctures inside more or less distinct; intervals weakly convex, each interval with median row of upright, apically truncate setae. Ventral surface alutaceous and very finely punctate-setose; metasternal midline weakly marked, disc more or less concave; abdominal sternites finely, shallowly punctate, sternite 5 with deep fluting. Profemur scabrously punctate, meso- and metafemora punctate-setose, metafemur longer than mesofemur with complete posterior line; basal tarsomere of metatarsus longer than upper tibial spur and shorter than next four tarsomeres combined. Male genitalia as in Fig. 5.

**R e m a r k s.** *Ataenius holopubescens* is very characteristic, its oval shape and apically lobed elytra help to distinguish it from other species in the group. This myrmecophilous species is hitherto known only from Mexico and Guatemala (Fig. 27) being almost certainly restricted to that area. The specimens were collected in May-August, sifted from detritus remnants in the vicinity or in the nests of *Atta mexicana*.

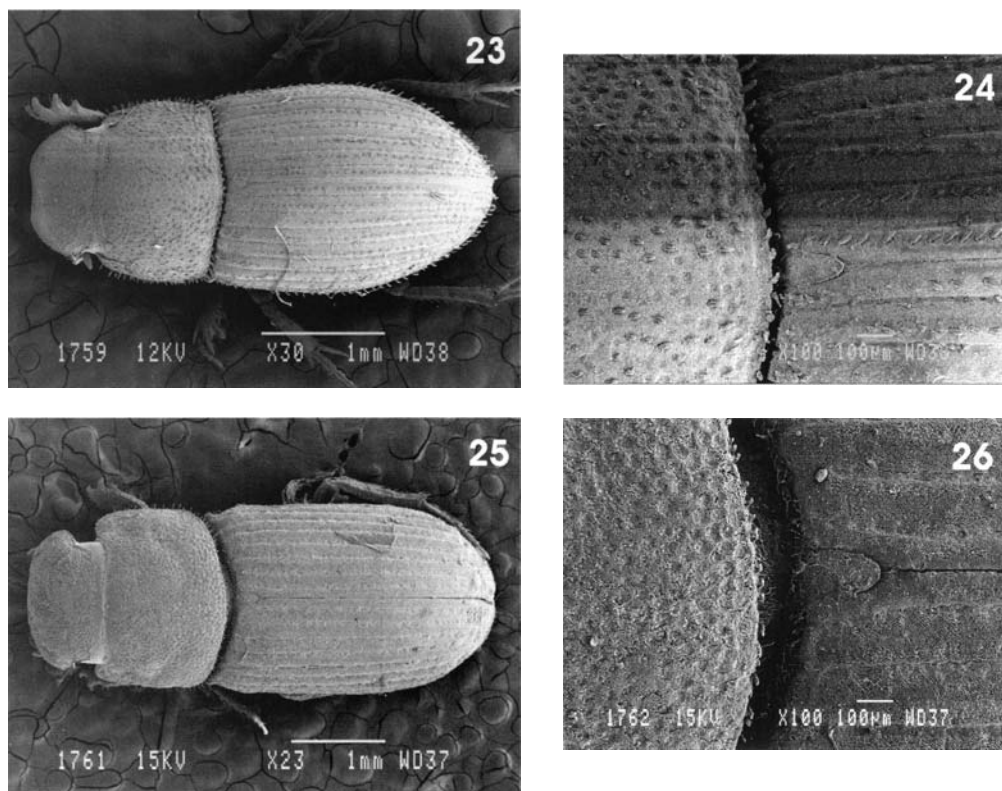
***Ataenius tuberculatus* SCHMIDT**

(Figs 6, 28)

*Ataenius tuberculatus* SCHMIDT, 1911: 15.- 1922: 442; DELLACASA 1988: 282 (catalogue);

Type data. Described from Colombia; location of type unknown

Material examined. Specimens (110). **Bolivia** – Beni, 40 km E of San Borja, Estacion Biologica Beni, Estancia El Porvenir, 6-8.IX.1987, W. E. STEINER (USNM); Santa Cruz, 5 km ESE Warnes,



Figs 23-26. 23, 24 – *Ataenius holopubescens* HINT.: 23 – habitus, 24 – pronotum and elytra (magnification 100x); 25, 26 – *A. pseudostercorator* sp. n.: 25 – habitus, 26 – pronotum and elytra (magnification 100x).

Hotel Rio Selva, 20.X.2000, M. C. THOMAS (FSCA). **Brazil** – (MT) Mato Grosso, Corumbá, coll. W. H. MUCHE (numerous specimens in SMTD), coll. ENDRÖDI (HNHM); (MG) Lassance, XI.1975, F. PLAUMANN (USNM). **Guyana Br.** – Hope Lt, 16-20.VII.1962, J. MALDONADO (USNM). **Venezuela** – Bolivar, Guri, 14.VI.1996, H. & A. HOWDEN (CMN); La Palmita (Edo Guarico), 28.XII.1975, leg. BORDON (ISEA); Guarico, 12 km S Calabozo, 6-12.XII.1969, P. SPANGLER; Apure, Hato del Frio, Hwy between Montecal and El Saman, 7.VI.1988, M. EPSTEIN (USNM).

**Diagnostic characters.** Length 4.2-4.5 mm. Body carbon black, surface partially covered with grey argillaceous coating. Head gibbose medially, finely setose, clypeal margin widely rounded on each side of narrow and shallow median emargination, gena prominent; surface from anterior margin to vertex evenly closely punctate, punctures longitudinally confluent near eyes. Pronotum transverse, lateral edge crenate with fringe of long slender setae; disc unevenly convex, with four slight swellings at middle and four larger, shiny convexities along base, surface punctures moderate in size, almost contiguous, rugose on sides of pronotum, bearing short pale setae. Elytra parallel-sided, humeral denticle fine, surface with scarce upright setae; striae weakly impressed, indicated by almost impunctate lines; even intervals flat, narrower than odd ones, intervals 3,5 with irregular in shape, larger and smaller, shiny black tubercles, interval 7 with widely spaced, small granules. Metasternum and abdominal sternites shiny, finely closely punctate. Metafemur longer than mesofemur, postfemoral line weakly marked; metatibia setigerous, basal tarsomere of metatarsus subequal in length to upper tibial spur and to following tarsomeres combined. Male genitalia as in Fig. 6.



Fig. 27. Known distribution of *Ataenius petrovitzi* BALTH., *A. balthasari* PETR., *A. holopubescens* HINT., *A. imbricatoides* SCHM., *A. carinatipennis* PETR. and *A. alternatus* (MELSH.) (distribution of *A. alternatus* in North America: see WOODRUFF 1973, figs 233-234; CARTWRIGHT 1974, fig. 6).

**R e m a r k s.** This unusual species noticeably differs from all other species of the group by the features given in the key. Specimens of *A. tuberculatus* were collected to black light traps in open grassy savanna and marsh.

***Ataenius impressus* (PETROVITZ)**

(Figs 7, 12)

*Dialytes impressus* PETROVITZ, 1963: 643-644 (named in litteris by A. SCHMIDT).- DELLACASA 1988: 283 (catalogue).

?*Phalangochaeta impressa*: STEBNICKA 1994: 75.

*Ataenius impressus*: STEBNICKA 1998: 204.

**Material examined.** Holotype (sex undetermined), labelled 'Brasilien, Mato Grosso, Corumbá, ex. coll. KAUFEL', '*Dialytes impressus* m. PETROVITZ, in ZSM. Paratypes (3), same data as holotype, in MHNG.

**Other specimens (22).** **Bolivia** – Santa Cruz, vicinity of Buena Vista, 28.XI.1998, V. TICHY (JSC). **Brazil** – (Go) Cabeceiras (Lagoa Formosa), 24-29.X.1964, Exp. Dep. Zool. (MHNG); (MT) Mato Grosso, Corumbá, coll. MUCHE (ISEA, SMTD); Mato Grosso, Varzea Grande Co. Cuiabá, 20.IV.1972, W. M. WHITCOMB (FSCA).

**D i a g n o s t i c c h a r a c t e r s.** Length 4.0-4.5 mm. Body piceous, almost entirely covered with greyish argillaceous coating. Head strongly gibbose, clypeal margin obtusely rounded on each side of shallow median emargination, gena wide, prominent; surface of head everywhere finely scabrous with short pale setae. Pronotum transverse, lateral edge minutely crenate, fringed with very short, stout setae; pronotal disc with shallow longitudinal midline, four very slight swellings anteriorly and four convexities along base, surface punctures generally fine, close, each bearing very short pale seta, lateral area of pronotum rugosely punctate. Elytra parallel-sided, humeral denticle fine, striae indicated by shallow, almost impunctate lines; discal intervals alternately elevated, even intervals slightly convex or flat, odd intervals tectiform, median carina with irregular row of minute setae more distinct on apical declivity of elytra. Ventral surface opaque; metasternum and abdominal sternites shallowly punctate, fluting along sternites moderate to coarse. Profemur scabrous, protibia with two lateral teeth and one spine-like tooth directed forwards; metafemur longer than mesofemur with weak posterior line; metatibia setose, basal tarsomere of metatarsus one fourth longer than upper tibial spur and slightly shorter than following tarsomeres combined. Male genitalia as in Fig. 7.

**R e m a r k s.** *Ataenius impressus* was originally described in the genus *Dialytes* HAROLD; it has a number of character states shared by the Australian species *Ataenius koebelei* BLACKBURN [= *Dialytes granifer* SCHMIDT (STEBNICKA & HOWDEN 1997)], and differs from that species only slightly by having a finer sculpture of the pronotum and elytra. Its closest relatives in South America seem to be *A. petrovitzi* from one hand and *A. pseudostercorator* sp. n. from the other, but it can be easily distinguished from these species and from other species of the group by the shape of protibia. Bionomy unknown; distribution as in Fig. 12.

*Ataenius pseudostercorator* sp. nov.

(Figs 18, 25-26, 28)

Holotype male, Bolivia, Santa Cruz, vicinity of Buena Vista, 28 Nov. 1998, leg. V. TICHY, in ZMHB. Paratypes (31): 7 – same data as holotype; 2 – Dpto Santa Cruz, Pcia Ichilo, Buenavista, II.1950, coll. MARTINEZ; 3 – Santa Cruz, Saavedra Res. Sta. 25 Mar. 1978, UV trap, O'BRIEN & SERRATE; 1 – Santa Cruz, Casilla, IX.1989, L. BRANISA; 1 – Santa Cruz, 3.7 km SSE Buena Vista, Hotel Fauna & Flora 430 m, 14-19.X.2000, tropical transition forest, M. C. THOMAS; 1 – same locality, 27-29.X.2000, WAPPES & MORRIS; 7 – Santa Cruz, 5 km ESE Warnes, Hotel Rio Selva, 20.X.2000, blacklight, M.C. THOMAS; 9 – Rosario, Lake Rogagua, 28.X-9.XI.1921, W. M. MANN, Biol. Exp. 1921-22. Paratypes are in: CMN, FSCA, ISEA, WWC, USNM, ZMHB.

**D e s c r i p t i o n.** Length 4.8-5.5 mm. Body (Fig. 25) elongate, moderately convex, opaque, minutely setigerous; ground colour brownish black, upper surface entirely encrusted by yellowish grey argillaceous coating. Head wide, strongly gibbose; clypeal margin widely rounded on each side of shallow median emargination, sides arcuate to obtuse, prominent gena; surface of head to vertex slightly rugose with fine longitudinal lines of united punctures extending from gena to gena, occipital area with band of round, dense punctures separated by less than one diameter. Pronotum (Fig. 26) transverse; side margin fringed with short setae and finely crenate; anterior angles rounded, sides arcuate to rounded posterior angles, base without marginal line; surface on each side of disc with more or less deep, oblique depression and smaller depression at anterior angles, middle of disc from anterior margin to base with moderate in size, rather shallow punctures separated by less than their diameter, punctures on sides and along base twice larger, becoming rugose along lateral margin. Scutellum narrow, small. Elytra feebly convex, preapical umbone distinctly indicated by united, apically convex intervals 6,8 and shortened intervals 5,7; elytral humeral denticles moderate in size, acutely pointed, striae and punctures fine, sculpture of intervals invisible, covered with close-fitting coating. Ventral surface opaque, uncoated; mesosternum scabrous, minute setae visible under high magnification; mesocoxae approximate; metasternal midline impressed, discal punctures coarse, separated by one diameter; abdominal sternites with fine, long fluting along sutures, punctate from side to side, punctures slightly larger than those of metasternum; apical half of

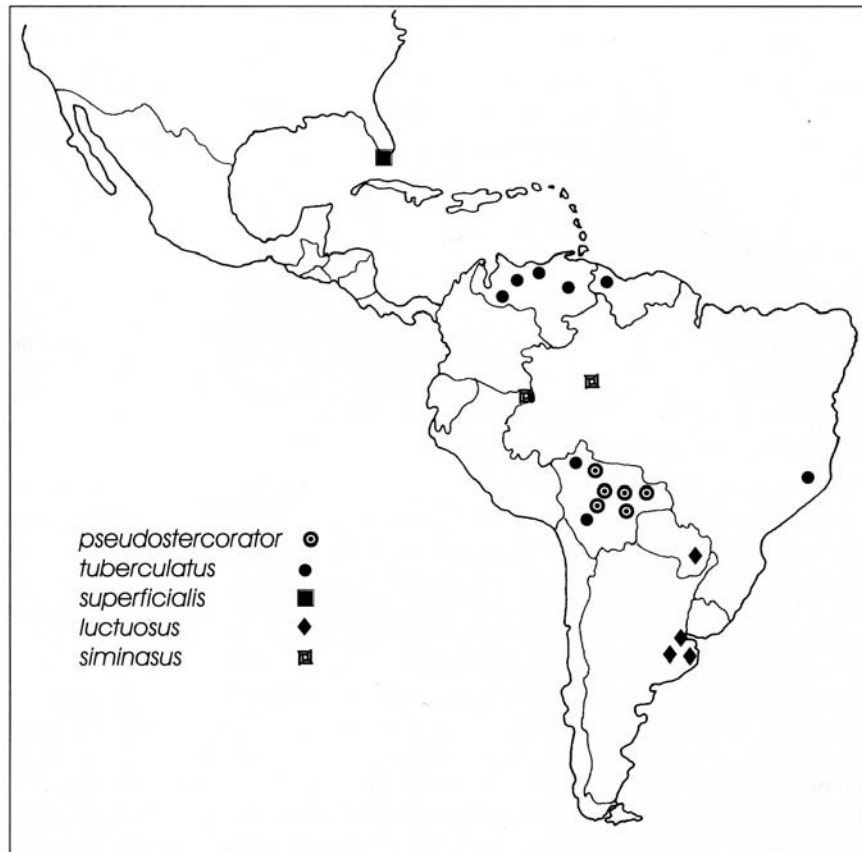


Fig. 28. Known distribution of *Ataenius pseudostercorator* sp. n., *A. tuberculatus* SCHM., *A. superficialis* CARTW., *A. luctuosus* (BURM.) and *A. siminasus* PETR.

pygidium scabrous. Legs moderate in length; profemur scabrous, perimarginal groove shallow; mesofemur wider than metafemur, surface punctate, postfemoral lines complete; meso- and metatibiae with setigerous longitudinal lines; inner line of metatibia finely denticulate, apex with few thick setae and spiniform external process, accessory spine lacking; metatarsus slender, basal segment 1/3 longer than upper tibial spur and subequal to following tarsal segments together.

Male. Pronotum usually wider than in female, penultimate abdominal sternite shorter. Genitalia as in Fig. 18.

**A f f i n i t y.** *Ataenius pseudostercorator* is one of the larger species in the group, resembling externally *A. stercorator*. It differs from *stercorator* by having the body tightly argillaceous, the pronotal surface with oblique fossulae and pronotal base without marginal line.

#### *Ataenius petrovitzi* BALTHASAR

(Figs 19, 27, 30-33)

*Ataenius petrovitzi* BALTHASAR, 1960: 6-7.- DELLACASA 1988: 279 (catalogue); STEBNICKA 1998: 203.

*Ataenius auropunctatus* PETROVITZ, 1973: 166-168.- STEBNICKA 1998: 203 (as synonym of *petrovitzi*).

Material examined. *Ataenius petrovitzi*: holotype (sex undetermined), labelled 'Bolivia, Es-  
piritu, 25.IV.1964, W. FOERSTER', "*Ataenius petrovitzi* BALTHASAR V.", in ZSM. *A. auropuncta-*



*tus*: holotype (sex undetermined), labelled 'Nord-Brasilien, Serra Pacaraima', '*Ataenius auropunctatus* m. PETROVITZ, in MHNG.

Other specimens (78). **Argentina** – Prov. Chaco, 100 km NW of Resistencia, Chaco NP., 16.XII.1990, S. & J. PECK; Prov. Santiago del Estero, Termos de Rio Honda, 16.II.1982, H. & A. HOWDEN; Prov. Formosa, 50 km NW Clorinda, PN Rio Pilcomayo, 17.XII.1990, S. & J. PECK (HAHC); Prov. La Rioja, Dpto Rosario Penaloza, Sierra de Argana, El Rocillo, 20.X.1997, IRWIN & PARKER (CMN). **Bolivia** – Santa Cruz, Buena Vista, 380 m, 20.II.1999, L. STANGER (PSC); Guayaramerin (Beni), Mamore River, 18.XI.1966, BALOGH & MAHUNKA & ZICSI (HNHM, ISEA); Santa Cruz, 5 km ESE Warnes, Hotel Rio Selva, 20.X.2000, M. C. THOMAS (FSCA); 60 mi N Santa Cruz, Saavedra Exp. Sta. 5.I.1960, R. B. CUMMING (USNM). **Brazil** – (Ro) Rondonia 60 km SW Ariquemes, 1.X.1994, U. SCHMITZ (PSC); (Rr) Roraima, Serra Pacaraima, IX.1971, F. PLAUMANN (CMN). **Ecuador** – Limoncocha 300 m, 31.III.1974, H. P. STOCKWELL; Napo, Tena, 1.VI.1977, W. E. STEINER (USNM). **Paraguay** – Cobecionados en Asuncion, 1912, A. BARBERO (ZMHB). **Peru** – Loreto; Pucallpa, 10-12.IV.1969, P. & P. SPANGLER; Cuzco, Quispicunchis, Quince Mill, 6-11.X.1976, R. GORDON; Huan, Tingo Maria, 19-24.IV.1969, P. & P. SPANGLER (ISEA, USNM).

**Diagnostic characters.** Length 3.0-4.0 mm. Body (Fig. 30) parallel-sided, piceous or brownish, upper surface entirely and tightly covered with olivaceous or greyish argillaceous coating. Head strongly gibbose, clypeal margin widely rounded on each side of shallow median emargination, gena prominent; surface narrowly shiny along anterior emargination, then closely longitudinally strigose to frons, vertical area with fine, nearly contiguous punctures. Pronotum convex, sides rounded, marginal setae short; surface in some specimens slightly uneven, with shallow oblique depression laterally, in some specimens depression invisible or discal area slightly unevenly convex; surface punctures generally fine, under magnification 100x (Fig. 31) appearing as shallow seta-bearing pores; under magnification above 1500x (Figs 32, 33), each pore is bounded by spatulate scales and bears a single, unusually shaped sensillum. Elytra weakly convex, parallel-sided; striae impressed with deep punctures inside, punctures usually completely masked by coating and invisible; intervals 3,5,7,9 more elevated than even intervals, tapering medially, rarely subcarinate, 10<sup>th</sup> interval deplanate; intervals 6,8,9 shortened before apex, convex, forming distinct preapical umbone of elytra, odd intervals apically with minute setae visible under high magnification. Ventral surface strongly alutaceous, very densely uniformly punctate, metasternum with impressed midline, abdominal sternites 4-5 deeply fluted. Metafemur narrower and longer than mesofemur with complete posterior line; metatibia and apical spurs relatively slender; basal tarsomere of metatarsus nearly two times longer than upper tibial spur and subequal to following tarsomeres combined. Male genitalia as in Fig. 19.

**Remarks.** The species is externally most similar to *A. impressus* and *A. pseudostercorator* sp. n. but differs from both these species by its smaller body and significantly finer sculpture of the head and pronotum. Nothing is known about the habitat of *A. petrovitzi*, the specimens were collected exclusively to light traps. Distribution as in Fig. 27.

### *Ataenius alternatus* (MELSHEIMER)

(Figs 21-22, 27)

*Oxyomus alternatus* MELSHEIMER, 1844: 137.

*Euparia alternatus*: LECONTE 1863: 37.

*Ataenius alternatus*: GEMMINGER & HAROLD 1869: 1066; HORN 1887: 75; SCHMIDT 1922: 442; WOODRUFF 1973: 111-113, figs 233-237; CARTWRIGHT 1974: 26-27, fig. 6; DELLACASA 1988: 85 (catalogue).

Type data. Described from "Pennsylvania". Holotype in MCZ.

Material examined. Specimens (8). **USA** – Florida, Enterprise, coll. ENDRÖDY (HNHM); Alachua Co., 25.III.1978, B. J. SMITTLE; Old Town, VI.1967, leg. LENCZY (ISEA).



**D i a g n o s t i c c h a r a c t e r s.** Length 4.0-4.8 mm. Body elongate, slightly convex, surface tightly covered with greyish brown argillaceous coating. Head gibbose, clypeus broadly emarginate medially, rounded on each side, gena prominent; surface of head everywhere closely punctate with longitudinal lines of united punctures. Pronotum convex with sides not completely visible from directly above and lateral margin with widely spaced, very short setae; surface closely shallowly punctate throughout, in some specimens vaguely indicated midline and lateral depressions. Elytra parallel-sided, striae deep, punctures inside striae more or less masked by coating; sutural and alternate intervals cariniform, carinae usually narrowly shiny, blackish, slightly uneven, flatter intervals on apical declivity slightly swollen, lacking setae. Ventral surface alutaceous; metasternal midline with deep pit or pore on each end, discal punctures coarse; abdominal sternites shallowly punctate from side to side. Profemur closely punctate, usually coated; metafemur longer than mesofemur, postfemoral line very fine or invisible; basal tarsomere of metatarsus longer than upper tibial spur and subequal to following tarsomeres together. Male genitalia as in Figs 21-22.

**R e m a r k s.** This is one of the most distinctive species in the Nearctic fauna, distributed in southeastern United States (see WOODRUFF 1973, figs 233-234 and CARTWRIGHT 1974, fig. 6). The dull alutaceous appearance and the alternately raised elytral intervals are similar to those in *A. luctuosus* and *A. petrovitzi*. According to WOODRUFF (1973), some specimens of *A. alternatus* were taken from beneath weed debris near water and from BERLESE samples of *Pinus clausa* litter and mahogany buttress debris.

***Ataenius luctuosus* (BURMEISTER)**

(Figs 20, 28)

*Euparia luctuosa* BURMEISTER, 1877: 411.

*Ataenius luctuosus*: HAROLD 1870: 20; SCHMIDT 1908: 92; 1922: 445; DELLACASA 1988: 155 (catalogue).

*Ataenius tectus*, PETROVITZ 1973: 175-176. **New synonymy.**

**Type data.** *Euparia luctuosa*: described from Argentina, Buenos Aires. Location of type unknown.

**Material examined.** *Ataenius luctuosus*: specimen labelled 'Arg. 1880', 'coll. Kessel' '*Ataenius luctuosus*, det. SCHMIDT A.' in ZMHB. *Ataenius tectus*: holotype female, labelled 'Argentina, Mar del Plata', '*Ataenius tectus* PETROVITZ, in MHNG.

**Other specimens (6).** **Argentina** – Buenos Aires, Pdo de Pilar, Est. del Viso, Nov. 1951, coll. MARTINEZ; San Martin, Campo Mayo, Feb. 1951, 1954, coll. MARTINEZ (CMN, ISEA). **Paraguay** – Central, E of Ypacarai, 29.IX.1996, D. MOYANO (ISEA).

**D i a g n o s t i c c h a r a c t e r s.** Length 4.0-4.8 mm. Body rather robust, piceous black, surface partially covered with brown argillaceous coating. Head gibbose, setaceous, clypeus broadly emarginate medially, rounded on each side, gena prominent; anterior face of clypeus narrowly shiny, surface of head above everywhere closely punctate with longitudinal lines of united punctures. Pronotum convex with sides not completely visible from directly above and lateral margin and basal edge with short stubby setae; surface setose and closely shallowly punctate throughout, punctures on sides slightly rugose. Elytra not quite parallel-sided, edge fringed with short setae, striae narrow, punctures inside striae fine, usually masked by coating; intervals 3, 5, 7 more elevated than even intervals with slight obtuse carina medially or all intervals at same level, flat or slightly convex, each with row of short upright setae on outer side. Ventral surface alutaceous; metasternal midline deep, disc finely punctate; abdominal sternites shallowly punctate from side to side. Profemur scabrously punctured, usually coated; metafemur longer than mesofemur, postfemoral line invisible, apex with strong spine-like external process; basal tarsomere of metatarsus longer than upper tibial spur and subequal to following tarsomeres together. Male genitalia as in Fig. 20.

**R e m a r k s.** Attempts to locate type of *A. luctuosus* were unsuccessful, but a series of specimens bearing locality data of type description was examined and compared with specimen

identified by A. SCHMIDT. Variation in the small series of specimens examined occurs mainly in the elytral characters; some individuals have the elytral setae longer, in some (apparently old specimens) the setae are shorter. The species closely resembles *A. alternatus*; since there is no overlap in the ranges of both species, the distribution is a useful aid for recognition. *Ataenius luctuosus* belongs to the rarely collected species, and seems to be restricted in distribution to a small area (Fig. 28).

*Ataenius schmidtii* nom. nov.

(Figs 17, 36)

*Ataenius argillaceus* SCHMIDT, 1916: 103 [non *A. argillaceus* CHEVROLAT, 1869 (nomen nudum), (= *A. imbricatus* (MELSHEIMER, 1844)] - DELLACASA 1988: 232 (catalogue).

Material examined. Holotype (sex undetermined) labelled „Typus”, „Argentinien” „*At. argillaceus* m.” in NRS.

Other specimens (34). **Argentina** – Prov. Entre Rios, Concordia, Salta route Enc., VI. 1954, coll. MARTINEZ (CMN), Route 124, 12 km, 29.XII.1991, M. ARCHANGELSKY (WWC); Rio Parana, Ibicúy, 10.XII.1979, S. FLINT (USNM); Prov. Formosa, 50 km NW Clorinda, PN Rio Pilcomayo, 17.XII.1990, S. & J. PECK (HAHC); Prov. Salta, Rio Pescado, VI. 1944, D. VELLARD (FMLT); Prov. Corrientes, Ituzaingo, 20.XII.1990, S. J. PECK (HAHC). **Brazil** – (MS) Selviria, UNESP Farm, 23.II, 18.III.1999, C. FLECHTMANN (CFC); (RS) Rio Grande do Sul, 7.XII.1952, leg. BIEŻANKO (USNM). **Paraguay** – Villarica, Independencia, 25 km E, 25.15S, 56.35W, 28.I.1991, S. ENDRÖDI-YOUNGA (TMP); Dep. San Pedro, Vaca Ihu, Est. Triangulo, 25.35S, 56.35W, 180 m, 1-6.XI.1995, 25-28.II.1993, BRETZENDORFER & HAUSER (SMNS); Caacupá, Central Capiata, 29.I.1996, S. & J. PECK (HAHC).

**Diagnostic characters.** Length 3.8-4.0 mm. Body piceous or greyish black, partially or entirely covered with argillaceous coating or dust; clypeal margin and legs reddish brown. Head relatively small, anterior clypeal margin reflexed, rounded on each side of narrow, deep median emargination; gena truncate, not exceeding eye with clump of setae; clypeal surface in anterior third shiny, punctures everywhere fine, evenly spaced, separated by one diameter or less. Pronotum transverse, lateral edge with fine crenations and very short setae; pronotal surface laterally finely setose, disc with dark, uncoated midline over posterior half and traces of transverse, uncoated areas midway to side; discal punctures very shallow, those on sides rugose. Elytra as wide as pronotal base, slightly arcuate, humeral denticle conical, acutely pointed; striae distinctly impressed with shallow, fine punctures, intervals slightly convex or flat with irregular rows of minute to fine punctures bearing minute setae on apical declivity of elytra. Ventral surface opaque, metasternum and abdominal sternites shallowly punctured, sternites finely fluted along sutures. Profemur with opaque, finely punctate surface, protibia rather wide; metafemur longer than mesofemur, with fine posterior line; metatibia relatively slender, external apical process spiniform, prominent; basal tarsomere of metatarsus subequal in length to upper tibial spur and shorter than following tarsomeres together. Male genitalia as in Fig. 36.

**Remarks.** *Ataenius schmidtii* is similar to *A. imbricatus* in a general shape of body. It can be distinguished from that species by having the head finely punctured with very narrow, truncate genae similar to those in *A. imbricatoides* which resembles very closely. As indicated on the labels, the specimens were collected to UV light in wet grassland and on pastures with *Brachiaria decumbens* complex. Distribution as in Fig. 17.

*Ataenius imbricatoides* SCHMIDT

(Figs 27, 37)

*Ataenius imbricatoides* SCHMIDT, 1909a: 36.- 1922: 443; DELLACASA 1988: 141 (catalogue).

Material examined. Holotype (sex undetermined) labelled ‘Typus’, ‘Argentinien’, „*At. imbricatoides* m.”, in NRS.

Other specimens (11). **Argentina** – Prov. Misiones, Pto Iguazu, XII. 1954, coll. MARTINEZ; Prov. Formosa, Clorinda, XII.1954, coll. MARTINEZ; (CMN, ISEA); **Brazil** – (SP) Piracicaba, 11.XII.1966, C. A. TRIPLEHORN (USNM); São Paulo 8.I.1967, V. N. ALIN (ISEA, USNM).

**D i a g n o s t i c c h a r a c t e r s.** Length 3.0-3.8 mm. Body almost parallel-sided, black, strongly encrusted by argillaceous, nubly coating. Head relatively small, clypeal margin narrowly reflexed, rounded on each side of narrow, deep median emargination, gena slightly truncate, not prominent; surface everywhere with shallow, areolate structure and laterally minutely setose, in strongly encrusted specimens structure invisible. Pronotum transverse, lateral margin slightly reflexed, fringed with moderate in length, clavate or spatulate setae separated by less than their length; anterior angles slightly deplanate, lateral tumosity conspicuous, a dark smooth midline occurs over posterior half and dark, uncoated spot midway to side; surface setose with similar, areolate structure as that on head. Elytra weakly convex, margins fringed with short, stubby setae separated by their length or more; striae shallow with fine punctures inside; intervals 3,5,7,9 slightly convex, each with two rows of curly setae, even intervals flat with single row of close, stubby setae. Ventral surface alutaceous; metasternum, femora and abdomen finely punctate; metasternal midline impressed, disc finely punctate, punctures of abdomen same size and density as those on metasternum, fluting of sternite 4-5 deep. Metafemur longer than mesofemur, surface punctures less dense, posterior line strong, complete; tarsi relatively long, basal tarsomere of metatarsus longer than tibial spur and shorter than following tarsomeres combined. Male genitalia as in Fig. 37.

**R e m a r k s.** *Ataenius imbricatoides* is externally very similar to *A. scabrelloides*, differing from that species by the shape and sculpture of elytra. It is rare in the collections, being probably restricted in distribution to the small area of southeastern South America (Fig. 27). Nothing is known about its habitat.

*Ataenius superficialis* CARTWRIGHT

(Fig. 28)

*Ataenius superficialis* CARTWRIGHT, 1974: 30-31, fig. 8.- DELLACASA 1988: 343 (catalogue).

Type data. Holotype male, Big Pine Key, Florida. No 71737 USNM.

Material examined. Allotype and 5 paratypes of females, same data as holotype, in USNM.

**D i a g n o s t i c c h a r a c t e r s.** Length 3.6-3.8 mm. Body oblong ovate, piceous, partially covered with greyish argillaceous coating which does not adhere very tightly. Head moderately convex, clypeal margin slightly reflexed, rounded on each side of moderately deep median emargination, gena right-angled; surface on disc minutely to finely punctate, laterally punctures larger, setigerous, uniting in longitudinal lines, occipital area with dense, shallow punctures showing through coating; frontal suture unusually distinct. Pronotum convex, side finely reflexed, margins with very short stubby setae; surface everywhere densely setigerously punctate, setae minute and inconspicuous, a flat smooth midline over posterior half and dark, uncoated spot midway to side. Elytra ovate, convex, humeri finely dentate; elytral striae and punctures inside deep; intervals moderately convex, each with row of short stubby setae along outside margin, elytral edge with fringe of similar setae. Ventral surface alutaceous, closely punctate and minutely setose; metasternal midline long, shallow, disc coarsely shallowly punctate; abdominal sternites with punctures similar to those of metasternum, fluting of sternite 5 nearly half as long as sternite. Profemur roughly punctate; meso- and metafemora punctate-setose, postfemoral line strong, complete with marginal row of widely spaced, short, stubby setae; basal tarsomere of metatarsus noticeably longer than upper tibial spur and shorter than following tarsomeres combined.

**R e m a r k s.** The male genitalia were not studied because of the lack of male in the material examined. In overall appearance, *Ataenius superficialis* resembles sympatric *A. miamii* and *A. scabrellus*, but it differs from both these species by having the elytral intervals slightly convex with no trace of median carina. The type series was collected (Fig. 28) under animal dropping (possibly from a racoon).

*Ataenius carinatipennis* PETROVITZ

(Fig. 27)

*Ataenius carinatipennis* PETROVITZ, 1973: 151-152.- STEBNICKA 1998: 203-204.*Ataenius granulipennis* PETROVITZ, 1973: 152-154.- STEBNICKA 1998: 203 (as synonym of *carinatipennis*).

Material examined. *Ataenius carinatipennis*: Holotype female, labelled "Brasilien Piaui Teresina I.1953, OLIVEIRA coll.", in MZUSP. Paratype female, same data as holotype, in MHNG. *A. granulipennis*: Holotype female, labelled "Mamanguape Paraiba Estate Bras.", "*Ataenius granulipennis* m. PETROVITZ", in MHNG.

Other specimens (1 female). **Brazil** – (Ce) Ceara, Baturite Mts, W. M. MANN (ISEA).

**D i a g n o s t i c c h a r a c t e r s o f f e m a l e s.** Length 3.0-3.1 mm. Body elongate oval, minutely setigerous, partially covered with greyish coating; colour piceous, ventral surface brownish. Clypeal margin subangulate on each side of shallow median emargination, gena prominent; surface of head finely punctate to upper fourth, laterally with lines of united punctures, occipital area with close, slightly elongate punctures, frontal suture indicated near eye. Pronotum convex, sides finely margined, lateral fringe of inconspicuous setae; surface densely, shallowly punctate, punctures become closer outward to sides and here rugosely confluent. Scutellum foveate medially. Elytra oval, humeral denticle small; striae deep, punctures inside fine, covered with dirt; intervals tectiform, slopes strongly alutaceous, median carina shiny, broken into small elongate tubercles; lateral intervals not different. Metasternum with deep midline, disc coarsely punctate; abdominal sternites with punctures similar to those of metasternum. Profemur moderately closely punctate; meso- and metafemora equal in length, finely punctate, metafemur with complete marginal line; basal tarsomere of metatarsus longer than upper tibial spur and shorter than following tarsomeres combined.

Male unknown.

**R e m a r k s.** *Ataenius carinatipennis* is very rare, only one female specimen was found in the extensive material examined. This is probably due to a poor exploration of the Amazon basin by the collectors. Species similar in general appearance to *A. scabrellus* and *A. miamii*, differs from both these species by having the elytral intervals glabrous and less elevated with median carina broken into longitudinal tubercles.

*Ataenius siminasus* PETROVITZ

(Figs 28, 34-35)

*Ataenius siminasus* PETROVITZ, 1973: 155-156.- DELLACASA 1988: 189 (catalogue).

Material examined. Holotype female, labelled "Brasilien Amazonas S. Felipe, XI.1901, leg. J. G. FOETTERLE", "*Ataenius siminasus* m. PETROVITZ", in MHNG.

Other specimens (2 females). **Brazil** – Amazon River, Arary to Manaos, 20-21.IX.1930, HOLT & BLAKE & AGOSTINI (USNM). **Peru** – Loreto, 40 km NE Iquitos on Amazon River, Explorama Inn. 22-24.VIII.1992, J. CASTNER & P. SKELLEY (ISEA).

**D i a g n o s t i c c h a r a c t e r s o f f e m a l e s.** Length 3.0-3.2 mm. Body (Fig. 34) elongate oval, minutely setigerous, tightly covered with greyish argillaceous coating. Head convex, clypeal margin subangulate on each side of shallow median emargination, gena prominent; anterior surface of head finely punctate, laterally with lines of united punctures, occipital area with close, almost contiguous punctures, frontal suture indicated near eye. Pronotum (Fig. 35) with oblique depression midway to sides, lateral margin slightly reflexed, fringed with inconspicuous, truncate setae, posterior angle right-angled, base distinctly sinuate; surface punctures gradually increase from very fine at anterior margin to moderate at base and outward to sides, being confluent rugose along lateral margin. Elytra widest in apical third, striae deep, punctures inside fine, longitudinal, masked by dirt; intervals cariniform, slightly swollen on disc, laterally and on apical declivity irregularly broken into granules; intervals 6, 8, 9 shortened before apex, forming small preapical umbone, interval 10<sup>th</sup> flattened. Metasternum with shallow midline, disc coarsely

punctate; abdominal sternites coarsely fluted along sutures with punctures similar to those of metasternum. Profemur moderately closely punctate; meso- and metafemora equal in length, finely punctate, metafemur with incomplete marginal line; basal tarsomere of metatarsus longer than upper tibial spur and shorter than following tarsomeres combined.

Male unknown.

**R e m a r k s.** *Ataenius siminasus* is very rare in the collections like as *A. carinatipennis* which it resembles very closely. It can be easily distinguished from that species and from all other species in the group by combination of the pronotal and elytral characters. Nothing is known about its habitat.

***Ataenius morator* HAROLD**

(Figs 29, 38)

*Ataenius morator* HAROLD, 1869: 103.- SCHMIDT 1922: 445; CHALUMEAU 1983: 71, fig. 34. DELLACASA 1988: 277 (catalogue); CHALUMEAU 1992: 200.

*Ataenius picipes* FLEUTIAUX & SALLÉ, 1889: 397.- CHALUMEAU & GRUNER 1974: 804, fig. 21; CARTWRIGHT & CHALUMEAU 1978: 13; CHALUMEAU 1983: 71 (as synonym of *morator*).

*Ataenius tenebrosus* ARROW, 1903: 512.- SCHMIDT 1922: 446; CHALUMEAU & GRUNER 1974: 804 (as synonym of *picipes*).

*Ataenius insitivus* BALTHASAR, 1961: 125.- CHALUMEAU 1992: 200 (as synonym of *morator*).

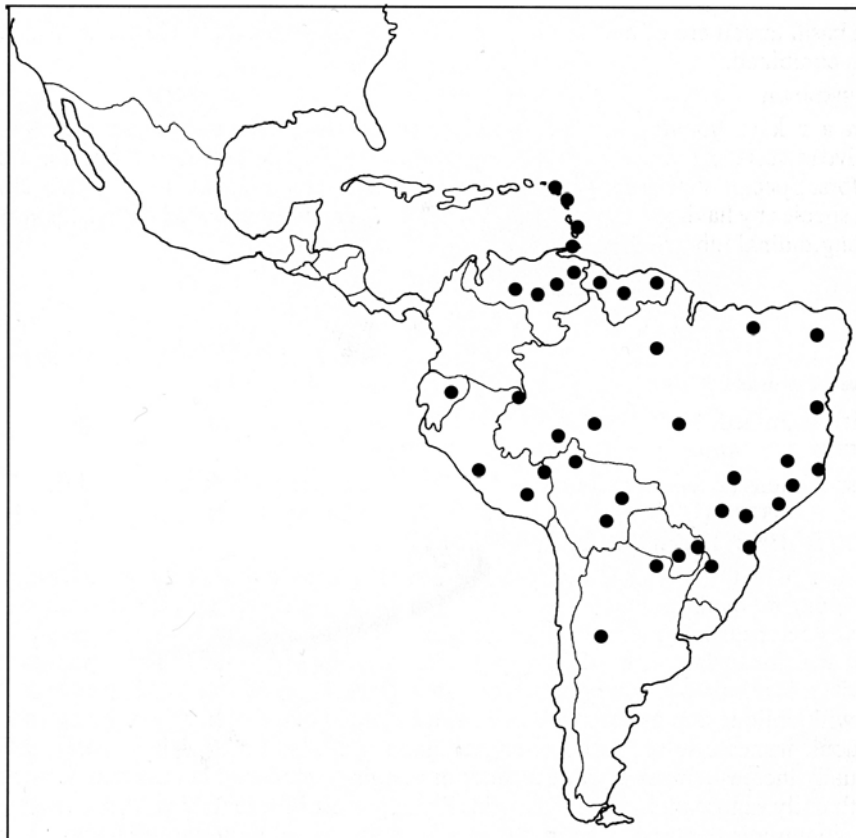
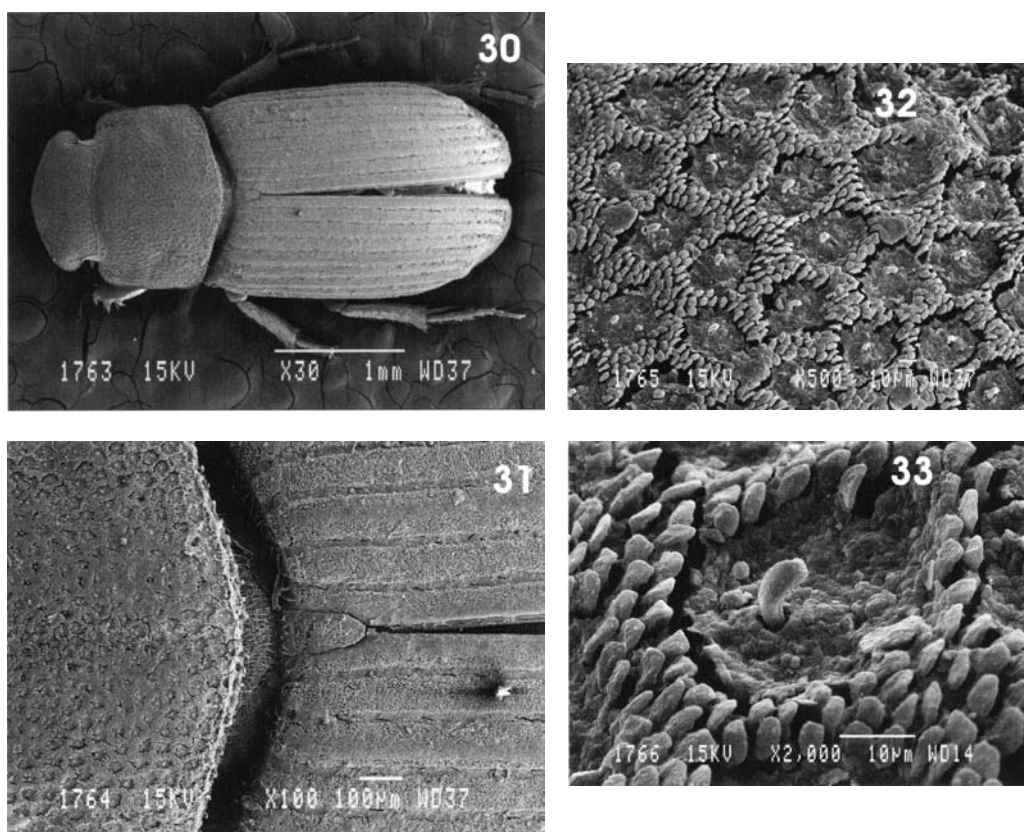


Fig. 29. Known distribution of *Ataenius morator* HAR.

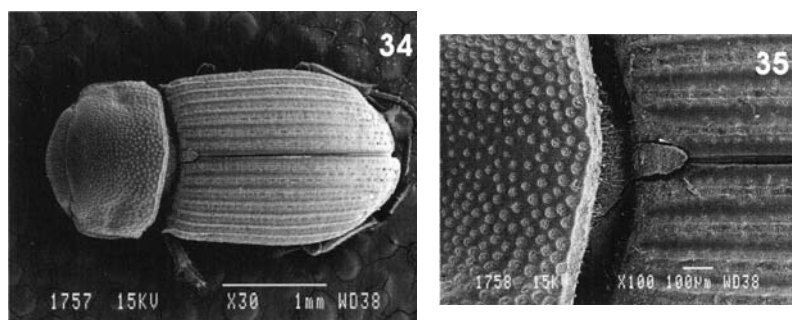


Type data. *A. morator*: Lectotype (Bahia) designated by CARTWRIGHT (1973), in MNHN; *A. picipes*: lectotype (Guyana, Camp Jacob) designated by CHALUMEAU (1977), in MNHN; *A. tenebrosus*: lectotype (Antilles, Grenada) designated by CHALUMEAU (1977), in BMNH; *A. insitivus*: holotype (Paraguay, Encarnacion), in coll. BALTHASAR (NMP).

Material examined. Lectotype of *A. morator*, holotype of *A. insitivus* and other specimens (397): **Argentina** – Prov. Misiones, Jardin America, Salto Tabay, 22.XI.1990, S. & J. PECK; Iguazú Nat. Pk, 25.XII.1990, S. & J. PECK; Prov. Formosa: 50 km NW Clorinda PN, Rio Pilcomayo,

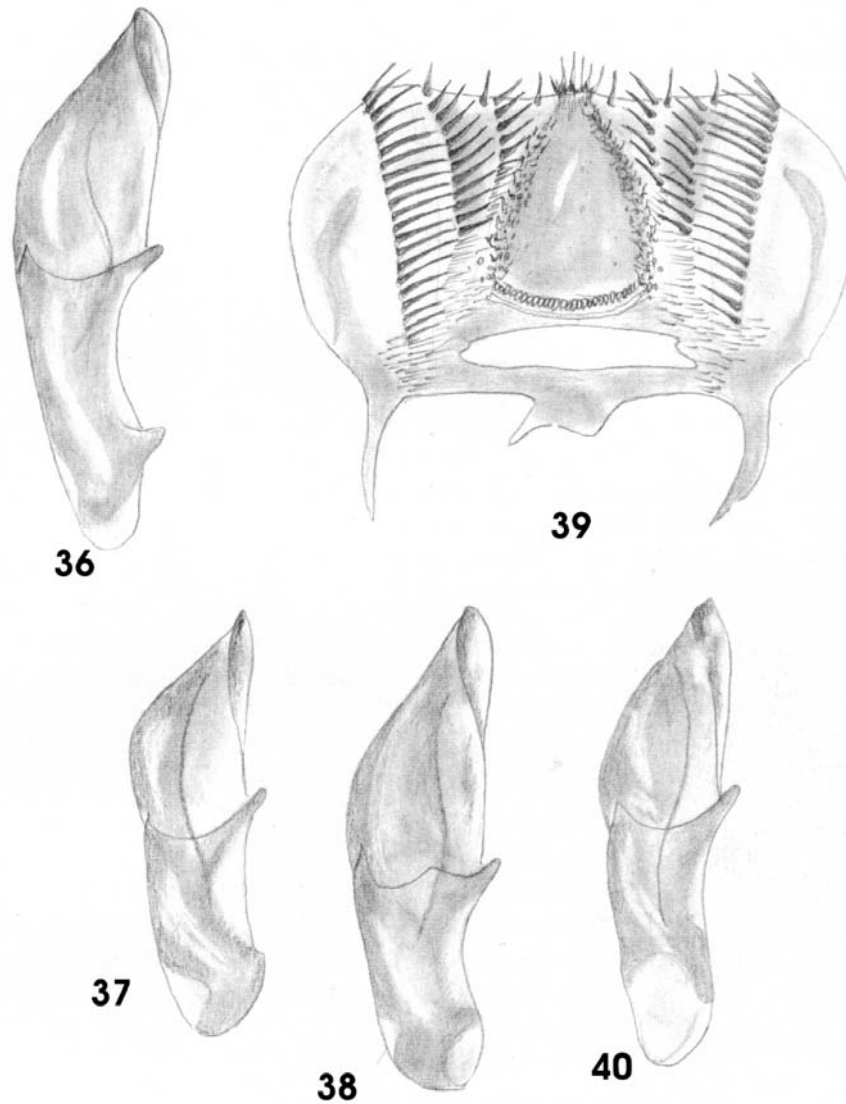


Figs 30-33. *Ataenius petrovitzi* BALTH.: 30 – habitus, 31 – pronotum and elytra (magnification 100x), 32, 33 – microsculpture of pronotum (magnification 1500-2000x).



Figs 34-35. *Ataenius siminasus* PETR.: 34 – habitus, 35 – pronotum and elytra (magnification 100x).





Figs 36-40. 36-38 – Male genitalia, aedeagus in lateral view: 36 – *Ataenius schmidtii* nom. n., 37 – *A. imbricatoides* SCHM., 38 – *A. morator* HAR. ; 39, 40 – *A. stercorator* (F.): 39 – epipharynx, 40 – aedeagus in lateral view.

17.XII.1990, S. & J. PECK; Prov. Cordoba, 4 km NE Cruz del Eje, 20.II.1982, H. & A. HOWDEN (CMN, HAHC). **Bolivia** – Guayaramerin (Beni), Mamore River, 24.XI.1966, BALOGH & MAHUNKA & ZICSI (HNHM, ISEA); Santa Cruz, Buena Vista, 380 m, 20.II.1999, L. STANGER (PSC); Santa Cruz 5 km ESE Warnes, Hotel Rio Selva, 20.X.2000, M. C. THOMAS (FSCA). **Brazil** – (AC) Rio Branco, II.1997, F. VAZ-DE-MELLO (FVMC); (MG) Teixeira, XI.1996, HARDY & HARRISON (USNM); Cordisburgo, Faz. Pontinha, VII.1994, F. VAZ-DE-MELLO (FVMC); (Pi) Teresina, I.1953, leg. OLIVEIRA (GO) Caldas Novas; (SP) Piracicaba 30.XII.1966, C. A. TRIPLE-HORN (WWC); São Paulo, 1.VII.1974, V. N. ALIN (WWC); Cerqueira Cesar; Mirante do Paranapanema, 30.X.1991, Mirasol Ranch, 22.I.1992, leg. RODRIGUES (CFC, MZUSP); Presidente

Prudente, 24.IV.1993, leg. RODRIGUES (CFC, USNM, ZMHB); (Rr) Roraima, Caracarai; (ES) Linhares, IX.1972, M. ALVARENGA (USNM); (RO) Rondonia, 62 km SW Ariquemes nr Faz. Rancho Grande, 8-20.XI. 1994, J. EGER & C. O'BRIEN (FSCA, PSC); (MA) Pedrinhas, Saõ Luis Isl. 26.VI.1984, leg. BERGMANN (CFC). **Colombia** – Leticia, Amazonas 700 ft, 19-25.II.1972, H. & A. HOWDEN (HAHC). **Ecuador** – Napo, Res. Faun. Cuyabeno Res. Sta 200 m, 14.V.1988, P. de OLIVEIRA (ISEA). **Guyana** Br. – Ituni, 1-2.VII.1970, B. FENTON (CMN). **Paraguay** – Villarica, Independencia, 25 km E, 21.I.1991, S. ENDRÖDY-YOUNGA (HNHM, ISEA); Vaca Ihu, Estancia Triangulo, 1-7.XI.1995, F. BRETZENDORFER (SMNS). **Peru** – Cuzco, Quispicunchis, Quince Mill, 6-11.X.1976, R. GORDON; Quince Mill; Madre do Dios, Rio Tambopata Res. SW Pto Maldonado 290 m, 2-5.XI.1979, J. B. HEPPNER; Huan, Tingo Maria, 19-24.IV.1969, P. & P. SPANGLER (USNM). **Surinam** – Vank; Brokopondo, Mazaroni Plat. Brownsberg NP (CMN). **Venezuela** – Bolivar, 20 km E El Palmar, 1.VII.1998, H. & A. HOWDEN; Bolivar, 22 km E of Upata, 16-18.VI.1996, H. & A. HOWDEN; Guri, 14.VI.1996, H. & A. HOWDEN (HAHC); Guarico, 15 km E Calabozo, Est. Biol. Los Llanos, 9-13.II.1969, P. & P. SPANGLER (USNM). **West Indies** – Guadeloupe. Trinidad: Ballandra Beach. 9.VIII.1969, Guaico, (Sangre Grande), 12.VIII.1969, H. & A. HOWDEN (HAHC); Morne Bleu; Tunapuna, 11-13.VIII.1969, H. & A. HOWDEN (HAHC).

**Diagnostic characters.** Length 3.8-4.2 mm. Body strongly alutaceous, piceous or greyish black, glabrous, uncoated, sometimes dusted. Head moderately gibbose medially, clypeus widely rounded on each side of deep median emargination, gena prominent; clypeal surface just above emargination narrowly shiny, then punctures everywhere fine, laterally united into longitudinal lines, those of vertex round, not close, separated by about one diameter. Pronotum transverse, convex, lateral and basal edge margined, side margin with inconspicuous setae; pronotal punctures dense, minute to fine punctures on disc become moderate outward to sides and here very close but not rugosely confluent. Elytra as wide as pronotal base, parallel-sided, humeral denticles moderate in size; striae narrowly impressed with distinct, shiny punctures inside; intervals slightly convex, in some specimens tending to elevate medially, sometimes minutely punctate throughout, usually inconspicuously setose apically. Ventral surface opaque, metasternum and abdominal sternites shallowly punctured, sternites finely fluted along sutures, fluting of sternites 4-5 coarser. Profemur with opaque, closely punctate surface, protibia rather narrow; metafemur longer than mesofemur, with complete posterior line; metatibia setigerous, external apical process spiniform, prominent; basal tarsomere of metatarsus a trifle longer than upper tibial spur and subequal to following tarsomeres together. In male, metatibia usually thicker than in female; genitalia as in Fig. 38.

**Remarks.** *Ataenius morator* resembles *A. stercorator* very closely but it can be easily distinguished by the characters given in the key. This species represented in all collections studied, was collected throughout the year to black light traps in various habitats including mangrove area, found under vegetation, in bovine dung, and in decomposing bananas. Distribution as in Fig. 29.

#### *Ataenius stercorator* (FABRICIUS)

(Figs 12, 39-40)

*Scarabaeus stercorator* FABRICIUS, 1775: 20.- OLIVIER 1789: 89, t.17, fig.155.

*Auperia stercorator*: CHEVROLAT, 1864: 413 (non FABRICIUS, 1775).

*Ataenius stercorator*: HAROLD 1875: 70 (non FABRICIUS, 1775); BATES 1887: 96 (redescription of type!); HORN 1887: 83 (non FABRICIUS 1775); SCHMIDT 1922: 422 (non FABRICIUS, 1775); PAULIAN 1937: 76 (non FABRICIUS, 1775); LANDIN 1956: 219-220 (redescription of type!); CHALUMEAU 1980:90-91 (non FABRICIUS, 1775); DELLACASA 1988: 202 (catalogue); BARAUD 1994: 58 (non FABRICIUS, 1775, synonymies misinterpreted!); STEBNICKA 1998: 200-201; 2002a: 742-743.

*Ataenius opacus* HAROLD, 1867: 100.- 1876: 97; SCHMIDT 1922: 444; DELLACASA 1988: 278 (catalogue); STEBNICKA 1998: 200-201 (as synonym of *stercorator*).

**Taxonomic background.** The generic relations with the specific name “*stercorator*” have been clarified by STEBNICKA (2002a). A misidentification of *Ataenius stercora-*

*tor* was initiated by HAROLD (1867) in his description of *Ataenius opacus*, being in fact the true *A. stercorator* described by FABRICIUS (1775). In 1875, HAROLD followed a misidentification of FABRICIUS' species, presenting its putative "redescription" that fits either to *A. rhyticephalus* (CHEVROLAT, 1864) and to *A. strigicauda* BATES (1887) described later. The above is confirmed in some measure by data on distribution commented by HAROLD (1875: 71) as follows [original citation]: "Von dieser Art liegen mir Stücke vor aus Nordamerika, einschliesslich Californien, aus Mexico, Columbien und den Antillen, aus ganz Brasilien bis nach Buenos Aires hinab, ebenso aus Mendoza und Chili". It can be assumed that HAROLD studied a mixed series of specimens of very similar and widely distributed species *A. strigicauda* and/or *A. rhyticephalus* and considered them as members of *stercorator*. Since then, in the course of over hundred years, most authors have applied FABRICIUS' name to at least three various species excluding the true *A. stercorator*.

Material examined. *Ataenius stercorator*: lectotype (Brazil, Rio de Janeiro) designated by LANDIN (1956), in BMNH (BANKS Coll). *A. opacus*: lectotype (Brazil) designated by CARTWRIGHT (1973), in MNHN.

Other specimens (147). **Argentina** – Prov. Misiones, Iguazu, II.1988, R. FOERSTER (SMNS); Arroyo Uruguay, p. Iguacú, 27.XII.1990, S. & J. PECK (CMN); Prov. Entre Rios, Concordia, XI.1979, coll. MARTINEZ (CMN); Prov. Chaco, Resistencia, Rio Negro, XI.1945, coll. MARTINEZ (CMN); 60 km NE Resistencia, 25.I.1989, O'BRIEN & G. WITMER (USNM); Prov. Corrientes, Ituzaingo, 20.XII.1990, S. & J. PECK (CMN). **Bolivia** – Villa Montes, 7-11.XI.1930, G. EISENTRAUT; Prov. Sara 700 m, 9.VI-2.VII, J. STEINBACH (ZMHB). **Brazil** – (MG) Piracicaba, 30.XII.1966, C. A. TRIPLEHORN (WWC), II.1974, F. PLAUMANN; Teixeiras, XI.1996, HARDY & HARRISON (USNM); Cordisburgo, Faz. Pontinha, VII.1994, F. VAZ-DE MELLO; Ipatinga, IX.1993, E. GROSSI (FVMC); (SP) Porto Alegre (ZMHB); (SP) São Paulo, 1.VII.1974, V. N. ALIN (WWC); (RN) Rio Grande del Norte, Natal, 1952, M. ALVARENGA (MZUSP); São Roque, Itatuba 950 m, 28.III-26.V.1983, J. SÁR (HNHM); (MS) Selviria, UNESP Farm, 14.XI.1999, C. FLECHTMANN (CFC); (Ba) Bahia; (RS) Pelotas, X.1973, F. PLAUMANN (USNM); (Sc) Santa Catarina, Guaramirim, 23.XII.1991, C. FLECHTMANN (CFC). **Paraguay** – Caacupá, Central Capiata, 28.I.1996, S. & J. PECK (HAHC); Dep. San Pedro, Vaca Ihu, 160 m, 20.IV.1986, K. F. HOBENSTEIN; Vaca Ihu S of San Pedro, Est. Triangulo, 180 m, 1-7.XI.1995, F. BRETZENDORFER (SMNS); Acahay, 27.X.1992, L.E. PENA (ISEA); Villarica, Independencia, 160 m, 28.I.1991, S. ENDRÖDY-YOUNGA (TMP). **Uruguay** – Rocha, Punto del Diablo, Cerro de Lechihuana, 24.XI.1995, J. VERDÚ (ISEA).

**Diagnostic characters.** Length 5.0-6.0 mm. Body sooty-black, slightly opalescent, glabrous, uncoated. Head strongly gibbose medially, clypeus widely rounded on each side of deep median emargination, gena prominent; clypeal surface just above emargination narrowly shiny, then punctures everywhere fine, laterally united into longitudinal lines, those of vertex round, close, nearly contiguous, frontal suture slightly elevated near eye. Pronotum transverse, convex, anterior angles widely rounded, protruding forwards; lateral and basal edge margined, side margin with inconspicuous setae; pronotal punctures generally fine, becoming slightly larger outward to sides and confluent at anterior angles, but not rugose. Elytra as wide as pronotal base, parallel-sided, humeral denticles distinct; striae narrow, deep, punctures inside relatively fine, elongate and shiny, sometimes weakly crenating inner margins of intervals; intervals flat, minutely punctate throughout, usually inconspicuously setose apically. Ventral surface opaque, metasternum and abdominal sternites finely shallowly punctured, sternites finely fluted along sutures. Profemur with opaque, finely punctate surface; metafemur longer than mesofemur, with strong, complete posterior line; meso- and metatibiae rather thick with more or less developed, setigerous denticles ventrally; apical external process spiniform, protruding; tarsi relatively long, basal tarsomere of metatarsus a trifle longer than upper tibial spur and subequal to following tarsomeres combined. Epipharynx as in Fig. 39. In male, metatibia usually more robust than in female; genitalia as in Fig. 40.

**Remarks.** This species closely resembles sympatric *A. morator*. It differs from all other species of the *imbricatus*-group by the combination of a dull sooty-black integumen and denticulate metatibia. The specimens were collected to black light traps, found in bovine dung on wet grassland and pastures with *Brachiaria decumbens* complex. Distribution as in Fig. 12.

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